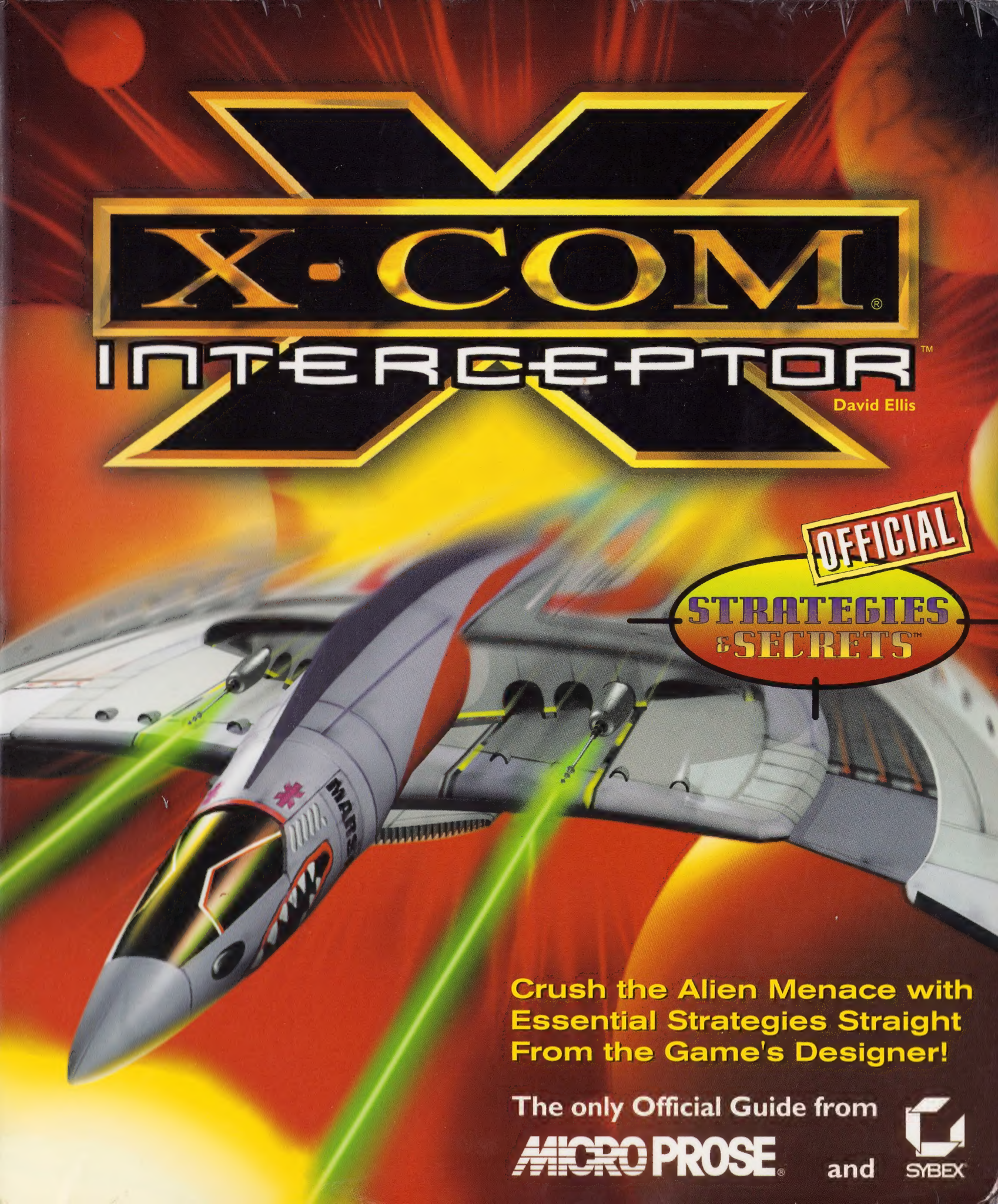
X-COM® INTERCEPTOR™

David Ellis

OFFICIAL STRATEGIES & SECRETS™



Crush the Alien Menace with Essential Strategies Straight From the Game's Designer!

The only Official Guide from MICROPROSE® and SYBEX®

OFFICIAL STRATEGIES & SECRETS™

David Ellis

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DEDICATION

For Meghan. Everything I do, I do for you.

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First, the book. I'd like to thank Roger Stewart at Sybex for giving me the opportunity to write the guide for the game I designed. The schedule was pure hell—but I made it, didn't I? Thanks also to Dan Brodnitz, Bill Cassel, and Tory McLearn for making the editing process a breeze.

There are lots of people who deserve thanks for *X-COM Interceptor* (the game), not the least of whom are Ken, Jeff, Steve, and Gilman at MicroProse corporate, who had faith enough in a new production team and a green designer to give us the go-ahead on a project in one of the company's flagship lines. I'd also like to thank Mark Reis and John Possidente, who helped me bounce around ideas and concepts way back when *Interceptor* was still in the "wouldn't it be cool if..." stage.

I'd also like to thank Adrian Turner, Andy Williams, and the rest of the *X-COM Alliance* team in the U.K. We're creating the future of the future together. Cheers, guys. See you at the next X-COM summit.

But, first and foremost, I'd like to thank everyone on the *Interceptor* team in Chapel Hill, North Carolina: Wayne, Lee, Paul, Mike, Guy, Eric, Hank, Tad, Al, Janis, Ryan, Greg, Scott, and Mike—y'all are the ones who took a bunch of amorphous ideas and 800 pages worth of words on paper and turned them into a truly awesome game.

And right now, I can hear John O'Neill saying, "Hey! What about me?" I promised you special mention so here it is: awesome job on the A.I., man. And thanks (in advance) for the numbers for the strategy guide. I don't care what anyone says—even though you're deserting us, you're okay in my book. (Get it? My book?)

Dave Ellis
May 25, 1998

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INTRODUCTION

18 months is a long time.

That statement is true even when you're not talking about looking at the same computer game day in and day out, 24 hours a day, seven days a week throughout that whole time period. Okay, I'm exaggerating—but only a little. During the design phase of *Interceptor* I spent the better part of three months burning the midnight oil, and during the production phase—especially the last three months—the programmers and artists spent many a sleepless night at the office, watching the sunrise through the office windows and wondering when they'd see home again.

But, you know what? When all was said and done, we still liked the game. In fact, we *loved* the game. Guess that says something, huh?

There's no doubt about it—*Interceptor* is a new breed of game. It's a strategy game, yet it's not. It's an action/space flight sim, yet it's not. It's an X-COM game, the same as, yet different from the X-COM games that came before it. A lot of people—MicroProse corporate people, other MicroProse designers, and X-COM fans—were really concerned that this game might be a bad idea. Somewhere in the middle of that 18-month stretch, even I started to concede that such might be the case. I don't feel that way anymore, though. Hopefully everyone else has come around, too. This game is *very much* an X-COM game—but it's also a lot more.

It's not often that a game designer writes a strategy guide for a game he designed. Hopefully, spending 18 months with the game and working on a daily basis with the production team has allowed me to fill this book with all the information and insight you'll need as a player to get the most out of *Interceptor*.

The real goal of this book is to help out any crossover players we might have picked up with our cross-genre game. The loyal X-COM fans who have limited flight experience should be able to glean all they need to know to become more effective in the cockpit, and the more action-oriented players should be able to learn everything they need to work their way through the strategy parts of the game and get into the action as painlessly as possible. Of course, I've always been one who believes that the lines between gamers in different genres aren't as cut and dried as all that—and that there are a lot of players out there who, like me, will enjoy the idea of an action game that is driven by a strategy element. A game where your every action determines the course of the game—and the fate of the game's universe.

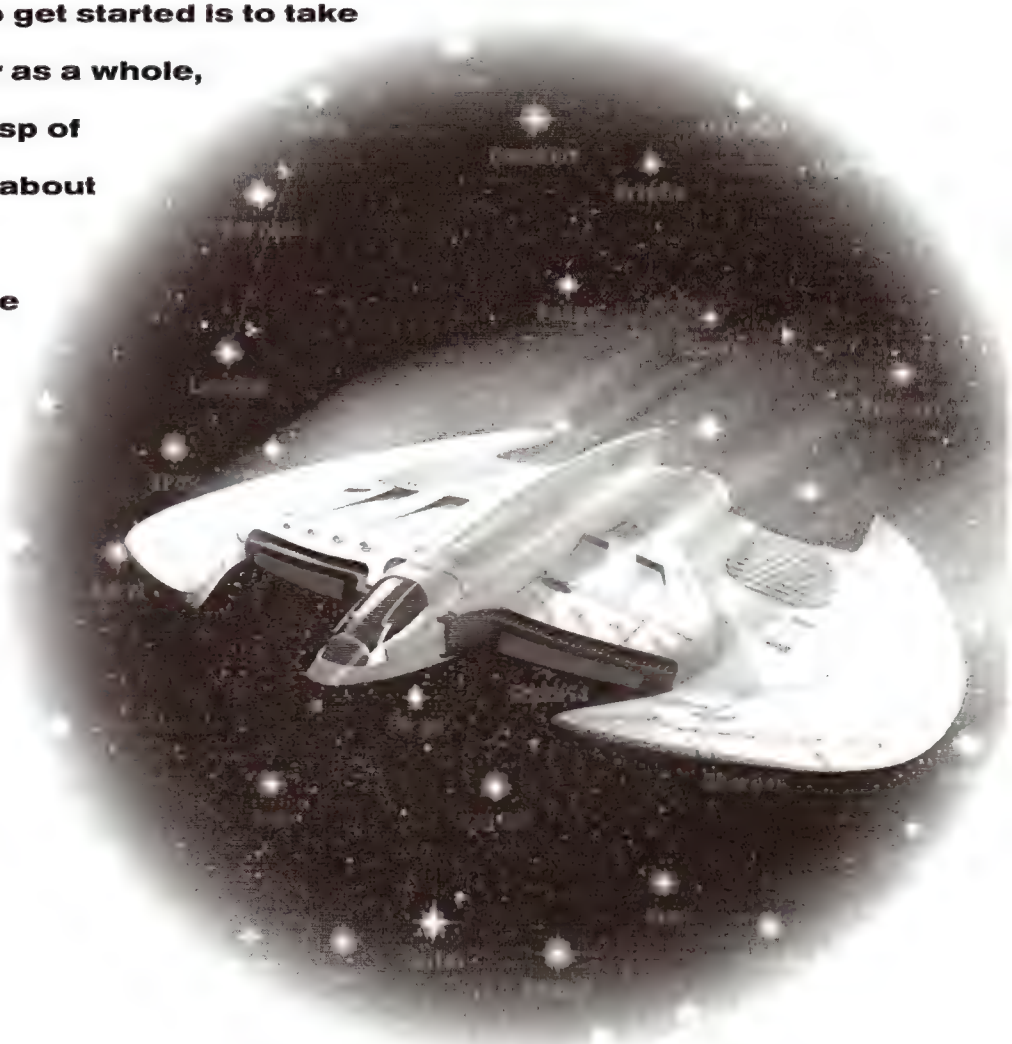
At any rate, read on to discover all the innermost secrets of *X-COM Interceptor*. And may you enjoy the game as much as all of us who spent the last year and a half of our lives creating it.

Chapter 1

X-COM INTERCEPTOR: THE BASICS

ELCOME TO THE FRONTIER! In *Interceptor*, the latest chapter in the X-COM universe saga, you are the commander of an advanced military operation on the edge of explored space. It's up to you to protect life as we know it on good old planet Earth against a bunch of aliens who are up to no good. Sound easy? Well, it might just be a little more difficult than you think. That's where this book comes in.

The best place to get started is to take a look at *Interceptor* as a whole, so you can get a grasp of what the game is all about and what you're expected to do. Once you understand the underlying game concepts, specific strategies and tactics will make a lot more sense.



X-COM FROM A NEW PERSPECTIVE

While many of you have probably been in this position before—commanding X-COM forces as you attempt to foil an evil alien plot—*Interceptor* presents the X-COM universe from a different point of view.

The strategy elements of the game are pretty much what an X-COM veteran expects—managing bases, juggling financial matters, and researching new technologies in an attempt to best the aliens. The mission types are similar as well: the aliens attack allied installations and X-COM bases, and you return the favor by locating and attacking their facilities.

> **Note** You can find detailed analyses of most of the game elements described in this chapter in appropriate sections later in this book.
>
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The difference is in the combat. Instead of acting as the leader of X-COM's ground forces, your job this time around is to jump into the cockpit of an interceptor and fight the alien invaders from a first-person perspective. That's right—you're not just giving orders anymore. This time you're right in the middle of the battle.

As you might expect, the combat side of *Interceptor* requires a lot of skills that are different from those you relied on in your previous stints as X-COM's C-in-C. Fear not, though. By the time you finish reading this guide, you'll be more than ready to beat the aliens at their own game.

THREE MODES OF PLAY

X-COM Interceptor offers three distinct gameplay modes. While this guide deals primarily with the skills and strategies required in the single-player campaign game, many of the combat tactics imparted here apply to simulated missions and multiplayer melees as well.

THE COMBAT SIMULATOR

Even if you're an X-COM veteran, you might not be used to sitting behind the controls of an advanced space fighter. As on-the-job training is not an option when the fate of Earth hangs in the balance, *Interceptor* incorporates a practice arena where you can hone your skills in a variety of combat situations that

> **Note** All the flight strategies described in this guide apply to simulated missions.
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simulate the missions and environments you'll encounter in the course of a campaign game. They include:

- **Dogfights:** Combat vs. alien ships in deep space.
- **Defense Missions:** Missions requiring you to defend X-COM and allied ships and installations from alien attack.
- **Attack Missions:** Simulated attack runs on alien convoys and facilities.

There is also a "Random" option that will select one of the three mission types and throw you into the fray.

MULTIPLAYER COMBAT

X-COM Interceptor is the first game in the X-COM series to offer a multiplayer option. While multiplayer mode doesn't give you the option of participating in an actual strategic campaign, it does allow you to take a customized X-COM ship into combat against other humans online. You can compete individually or in teams in virtually any environment found in the campaign game as you attempt to prove once and for all who's the top dog in the Frontier.

> ***Multiplayer Tip*** **Although all combat-related information applies to multiplayer games, you'll find specific multiplayer tips scattered throughout this guide. These tips highlight tactics and tricks that serve particularly well in the deadly world of online combat.**
>
> MULTIPLAYER TIP-O-MATIC

THE SINGLE-PLAYER CAMPAIGN

The campaign game is the heart of *Interceptor*. Here, you will manage all the resources of the Frontier and all of X-COM's assets, protecting allied corporations from the aliens as you attempt to discover—and ultimately foil—their plans for the destruction of Earth.

And what are those plans, exactly? After their failure in the first two Alien Wars (as recounted in *X-COM UFO Defense* and *X-COM Terror from the Deep*), the aliens have given up trying to dominate our planet. The bad news is that they are in the process of constructing an all-powerful Doomsday Weapon that's capable of destroying the entire planet with a single powerful blast (Figure 1.1). Once the Doomsday Weapon has done its job, the aliens can take what's left of Earth without opposition.

Fortunately, you're out there to stop them.

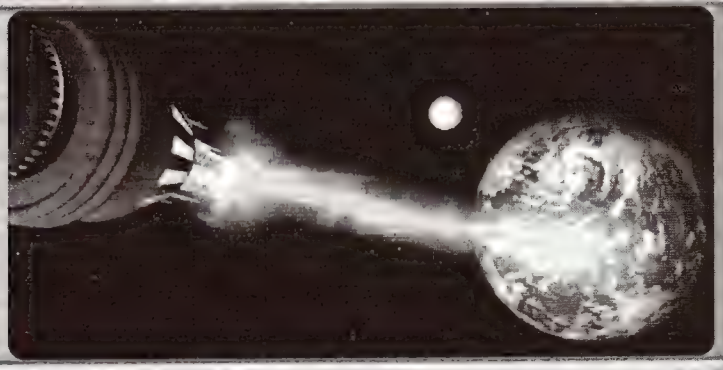

Figure 1.1

The Doomsday Weapon makes things hot for Earth.

THE EFFECTS OF DIFFICULTY LEVEL

Like most games, *Interceptor* allows you some control over the difficulty level of the game. In this case, there are five levels of challenge from which to choose:

- Beginner
- Experienced
- Veteran
- Genius
- Superhuman

Depending on which level you select, your *Interceptor* experience can range from mild and forgiving to wild and unrelenting. The specific differences depend on the game mode you select.

DIFFICULTY LEVEL IN THE COMBAT SIMULATOR

In the Combat Simulator, increases in difficulty level are pretty straightforward. Difficulty level affects the following mission elements:

- **Number of alien ships:** The higher the difficulty, the more ships that are present.
- **Alien ship defenses:** At lower difficulty levels, the aliens use less-powerful shields and are less likely to be equipped with armor.
- **Alien weapons and equipment:** The lower the difficulty, the more primitive the aliens' armament. For example, at Beginner level the aliens are generally

equipped with Plasma Pulse Cannons (the least powerful alien beam weapon), whereas at Superhuman they often have Tracer Cannons (the most powerful beam weapon).

- **Frequency of fire:** The aliens fire more frequently at higher difficulty levels.
- **Flying ability:** At lower difficulty levels, alien pilots aren't tremendously skilled. Their skill and aggressiveness increase as difficulty level increases.
- **Cloaking Device effectiveness:** The Cloaking Device's ability to disrupt missile lock is decreased as difficulty increases.

DIFFICULTY LEVEL IN THE SINGLE-PLAYER CAMPAIGN

In the flight section of the game, the single-player campaign follows the same general difficulty parameters described for the Combat Simulator. The effects are more far-reaching in a campaign, however, since difficulty also affects the strategy portion of the game. The following items vary according to difficulty level in the single-player campaign:

- **Starting treasury:** The starting treasury decreases as difficulty increases.
- **Outpost funding:** Outposts contribute less to X-COM each month at higher difficulty levels.
- **Alien "research":** The lower the difficulty level, the longer it takes for aliens to make technological advances.
- **Alien resources for Doomsday completion:** It takes fewer resources for the aliens to complete their Doomsday Weapon at higher difficulty levels.
- **Alien ship "toughness":** At lower difficulty levels, the alien ships don't use armor and are, therefore, easier to kill.
- **Number and type of alien ships in a mission:** As a general rule, higher levels of difficulty mean you'll encounter more (and more advanced) ships in various mission types.

> **Note** The specific effects of difficulty on various aspects of the game are covered in the appropriate chapters of this book.
>
> NOTE-MASTER 2000

- **Collection of battlefield "goodies":** When you are successful in battle, any floating equipment on the battlefield is automatically returned to your base. The chance of equipment surviving the destruction of an alien ship decreases dramatically as difficulty increases.

A CLOSER LOOK AT THE SINGLE-PLAYER CAMPAIGN

X-COM Interceptor's single-player campaign is essentially two games in one: a 3D, first-person space combat simulator governed and guided by an in-depth strategy game of research and resource management. The main thing that sets *Interceptor* apart from other games in the space combat genre is that the action doesn't follow a linear script. The effectiveness with which you handle the strategy portion of the game determines what missions you fly in the action/combat portion of the game.

Since this game is somewhat unique, it helps if you have a general grasp of what you are expected to do throughout the campaign.

THE STRATEGY OVER-GAME

The *strategy over-game* is where you'll make all the decisions that determine the course of the game. Here, you'll decide what technologies to research, manage your financial resources, build and equip your bases, buy equipment and weapons, recruit pilots, and outfit your interceptors for combat. Your main point of operations in the strategy portion of the game is the Campaign Strategic Display (CSD). From this main screen, you can access every game function (see Figure 1.2).

> **Note** The following sections give you a brief overview of the major strategy elements of the game. For more detailed insight into these topics, see the appropriate chapters later in this guide.
>
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RESOURCE MANAGEMENT

This is one of the many things you don't have to worry about in a traditional space combat sim. In *X-COM Interceptor,* however, the strength and effectiveness of your presence in the Frontier depends on the monthly contributions of the corporate outposts mining and processing raw materials in the area. If you do your job well and protect these outposts, more outposts are established and funding from existing outposts increases. If, on the other hand, the outposts suffer heavily from alien attacks, funding *decreases*. New outposts aren't established and existing outposts may even vacate the Frontier to pursue safer commerce back on Earth.

Even if your funding is stable and the number of outposts in the Frontier is increasing at a steady pace, you still have to keep a close eye on your resources. Every missile you fire in combat costs money. Every ship you lose is another million-plus dollars down the drain. Every trained pilot killed in combat is an investment in money and time that is lost forever.

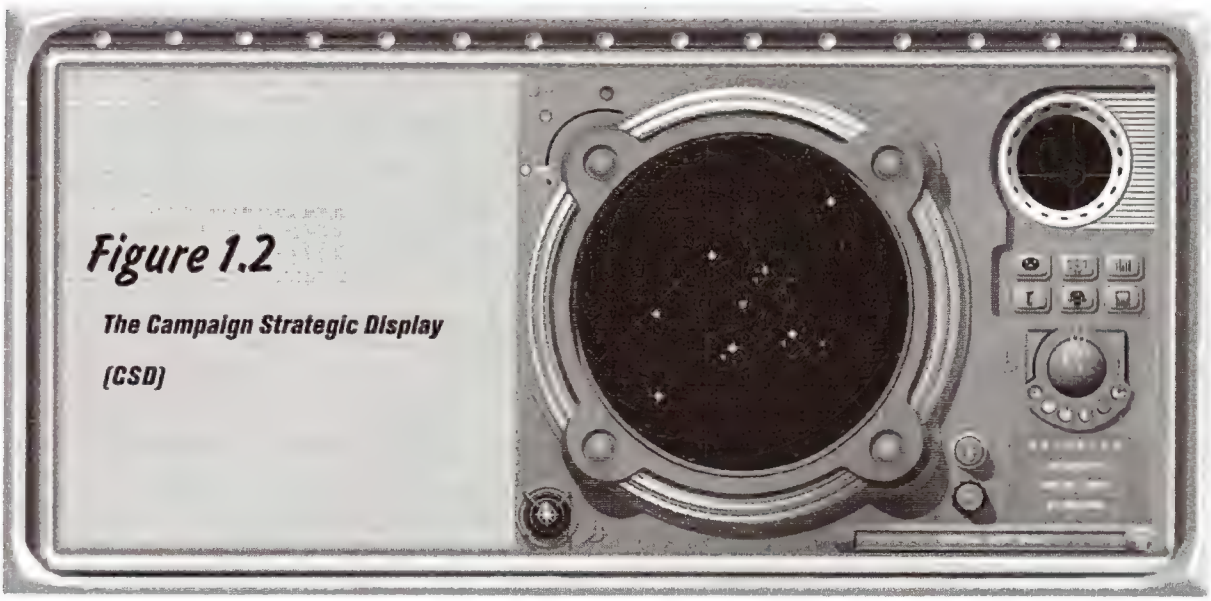


Figure 1.2

The Campaign Strategic Display (CSD)

On top of all this, you have your bases and your interceptor fleet to worry about. Should you build a new base now, or should you add a few new interceptors to your forces? Should you build a Training Module to improve your pilots' abilities or buy new weapons for your ships? These are the decisions that make an X-COM commander's life interesting.

RESEARCH AND DEVELOPMENT

There's absolutely no way you can hope to defeat the aliens—or even hold your ground against them for long—with a few tiny Lightning II interceptors armed with simple Laser Cannons and X-Winder missiles. As usual, the aliens are two steps ahead of you technology-wise, and it is up to you to collect the technology necessary to replicate the enemy's weapons and give back a little of what you're taking. That's where research comes in (see Figure 1.3).

After every successful mission, your pilots return with bits and pieces of technology and other items left behind after the destruction of the alien vessels. On occasion, you will even capture alien vessels intact. (Indeed, the capture of at least one of each alien fighter type is *essential* to your research efforts.) You'll also receive some alien transmissions from time to time—not simple pilot chatter, but actual intelligence communiqués from the alien dimension—that (once researched) provide clues to the aliens' plans. The booty and transmissions picked up on the battlefield are the starting point of all research.

Unlike previous X-COM games, in *Interceptor* there is no lab full of scientists waiting at your base to examine these alien artifacts. Instead, the scientists back on Earth do the work for you—all you have to do is download the information from the computers back home.

It's up to you to keep your research current. If you fall behind, the aliens will overrun you in time just through sheer firepower and defensive strength, and all hope will be lost.

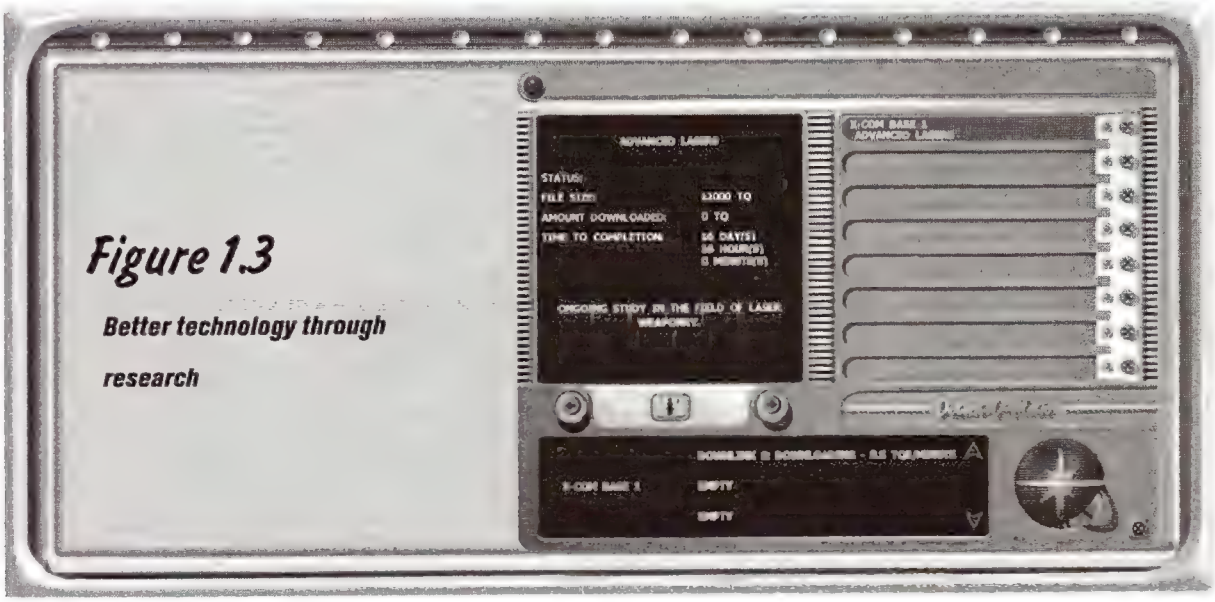


Figure 1.3

Better technology through research

PROTECTING THE FRONTIER

As commander of the X-COM forces in the Frontier, it is your job to keep all human properties in the Frontier safe from enemy attacks. This usually means protecting outposts and ore processing plants (OPPs) from the aliens. In order to perform this duty properly, you must strategically expand X-COM's presence, providing adequate cover for new outpost systems without spreading your forces—and your resources—too thin. This is your primary task. If you fail, you'll eventually lose.

SPACE COMBAT

When you're not spending your time juggling resources and building up X-COM's military strength in the Frontier, you're out in the thick of things—making the galaxy safe for mankind from behind the controls of a state-of-the-art star fighter (see Figure 1.4). Once you're there, all the worries of resource management and administration are left behind as you fight desperately to destroy the alien targets at hand and get yourself and your wingmen back to the base in one piece.

A QUICK TOUR OF THE FRONTIER

The area of space known as the Frontier is an open cluster of stars approximately 100 light-years from Earth. The region is only about 10 light-years across, but it contains a huge number of stars for such a small volume of space. The stars are of varying spectral class, ranging from small, cold red dwarfs to super-hot blue giants. The unusual cross section of spectral classes has no effect on space flight—even the weakest interceptor shields can handle stellar

Figure 1.4

Duking it out with the aliens

radiation at orbital distances—but it *does* affect the number of planets orbiting each star and the mineral richness of those planets. (See Chapter 2 for details.)

There are, however, a couple of natural phenomena that *can* potentially affect space flight in the Frontier: asteroid fields and black holes. An asteroid field is the remains of a planet that just couldn't pull itself together during the formation of a star system. These vast wastelands of floating boulders are highly coveted by Earth corporations, since mineral mining is much easier and more lucrative in these regions (see Chapter 2). Unfortunately, when an ore processing plant is established in an asteroid field, there is the chance that you'll be forced to defend it from alien attack. That means flying and fighting in the area, and that can be tricky. Slamming into an asteroid at combat speed can be hazardous to your health.

The other phenomena you'll eventually encounter are black holes (see Figure 1.5). There is an unusually high concentration of black holes in the Frontier, and they don't appear on the CSD map. For the most part, they don't pose a threat—you might lose a probe or two, but when your ships' long-range sensors detect a black hole, they automatically alter their courses to avoid being caught in the gravity well.

Black holes are only dangerous in battle. Their intense gravity pulls constantly on all objects in the vicinity, including your ship. This means that flying around is a bit difficult. It also means that missile combat is virtually impossible, as the weaker engines of the

Multiplayer Tip **When playing a multiplayer game near a black hole, try using Tachyon Pulsers to disable your opponents' ships. Once their engines are gone, they'll simply drift into the black hole and die a slow, agonizing death.**

MULTIPLAYER TIP-O-MATIC

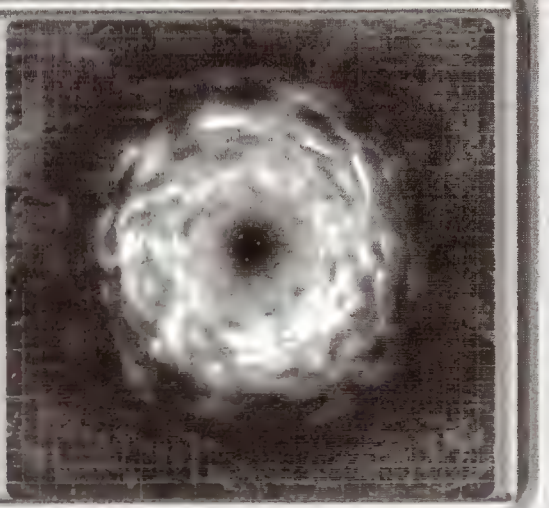


Figure 1.5

A black hole

missiles make them less capable of fighting the collapsed star's gravity. The closer you get to a black hole, the stronger the pull until, eventually, you cannot escape. Don't worry—you won't be sucked right into the center of the black hole. Your ship will be destroyed long before that can happen.

Only the final two battles in the campaign game take place near a black hole. However, in a multiplayer melee, the black hole environment can be chosen by the host player. Be prepared for this contingency whenever you join an online game.

MISSION TYPES

There is no set number of missions in *X-COM Interceptor*, and the flow of the game determines the types of missions you fly. There are, however, a number of basic mission types in which you'll engage throughout the game. They are detailed in the following list.

- **Defensive missions:** These are the most common mission types early in the game. They involve defending corporate outposts, OPPs, freighters, and X-COM bases from alien attack.
- **Offensive missions:** Early in the game, most offensive missions will have you attacking alien probes, fighter squadrons, and stray freighter convoys in deep space. Later in the game, as your fleet strength increases, offensive missions expand to include attacks against alien outposts, mining platforms, and even bases.
- **Side missions:** Throughout the game, you occasionally have the opportunity to engage in missions that are not directly related to your conflict with the aliens. When such a mission becomes available, you receive a special

notification prompt. Side missions are strictly optional, but you should take them on whenever possible, as they lead to financial gain and increased status for X-COM.

All the mission types are described in detail in Chapters 8 and 9.

WINNING AND LOSING

The goal of the campaign game is to destroy the aliens' Doomsday Weapon and seal off the entrance to their universe. If you are able to do so, you win.

Here are the conditions that cause you to lose the game:

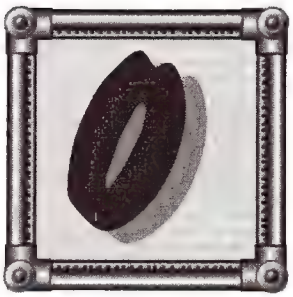
- The aliens complete the Doomsday Weapon before you are able to launch your final attack.
- Your last base is destroyed.
- You are unsuccessful in the final battle.

SCORING IN THE SINGLE-PLAYER CAMPAIGN

Your game score has no bearing on campaign victory (or lack thereof). It does, however, affect your financial standing throughout the game. The outpost systems use your score to determine funding changes at the beginning of each month. In *Interceptor*, you gain and lose points as a result of your combat performance. You also gain points for objects collected after a battle (see Chapter 2 for details).

Chapter 2

X-COM FINANCES



NE OF THE PRIMARY STRATEGIC issues vying for your attention in *X-COM Interceptor* is the financial well-being of X-COM's Frontier operations. Not only do you have to make sure that your funding continues to improve throughout the game, you have to make sure that your combat and non-combat activities don't put too significant a dent in your treasury.

In this chapter you'll learn how *Interceptor*'s financial model operates, and what you can do to keep X-COM's ledgers in the black. First, we'll look at how the random generation of the universe at the beginning of the game affects you financially. Then we'll discuss the functions of outposts, which are sources of both income and equipment, and OPPs. Next, we'll explore the factors that affect your monthly balance sheet, both what comes in and what goes out. Finally, we'll get into the nuts and bolts of how purchasing and manufacturing operate in *Interceptor.*

HOW THE FRONTIER IS GENERATED

Like any strategy game, *Interceptor* includes certain game elements over which you have no control that nonetheless affect you throughout the campaign. For the most part, the random elements that affect your finances are determined during the generation of the universe at the start of each game.

> **Note** The descriptions of many of the tables throughout this guide refer to "die rolls." A die roll is simply a random number generated by the game. For example, "1-100 die roll" is a randomly generated number between one and 100.
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Every time you start a new campaign, *Interceptor* generates a new game universe. Each new iteration of the Frontier brings with it new financial possibilities. The following sections discuss the various aspects of universe generation that ultimately affect your finances.

STARS AND SPECTRAL CLASS

The first thing the game does is generate the stars. First, the number of stars is determined by a 1-100 die roll as shown in Table 2.1.

Table 2.1: Generating the number of stars in the game

Die Roll	Number of Stars
1-10	40
11-20	50
21-90	60
91-100	80

Once the number of stars is determined, they are randomly placed on the map. The game then determines the spectral class of each star as shown in Table 2.2. Spectral class is the star's size and color. Although the size and color of a star has no effect on the space combat portion of the game (except to provide visual variety), it does indirectly affect a number of financial factors, as shown later in this chapter.

> **Note** There is always at least one black hole in the Frontier—the one that acts as the entrance to the aliens' universe.
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> NOTE-MASTER 2000

Table 2.2: Determining the spectral class of stars

Die Roll	Spectral Class
1–2	Red giant
3–6	Blue giant
7–10	Black hole
11–13	White dwarf
14–24	Blue
25–35	White
36–70	Yellow
71–85	Orange
86–100	Red dwarf

PLANETS AND ASTEROID FIELDS

After determining the spectral class of every star, the game places planets and asteroid fields in orbit around them. This is where spectral class has an effect on your finances—certain stellar types are less likely to have satellites than others. The amount of raw materials available for extraction by your outposts each month also varies based on spectral class. Table 2.3 shows the distribution of planets by spectral class.

Table 2.3: Determining the number of satellites in each system

Die Roll	Spectral Classes								
	Red Giant	Blue Giant	White Dwarf	Blue	White	Yellow	Orange	Red Dwarf	Black Hole
1	0	1	0	1	1	2	1	0	0
2	0	2	0	1	1	2	2	0	0
3	1	3	0	1	1	2	2	0	0
4	1	3	1	2	2	3	2	0	0
5	1	3	1	3	2	3	3	0	0
6	2	4	1	3	2	4	3	0	0
7	2	4	2	4	3	4	4	0	0
8	2	5	2	5	4	5	5	1	0
9	3	5	2	5	4	5	5	1	0
10	4	5	3	5	4	5	5	1	0

Each star has a maximum of five satellites. Once the number of satellites in each system is determined, each satellite is placed in one of five orbital positions (numbered one to five moving out from the star). At this point, the game also determines whether the satellite in question is a planet or an asteroid field. Table 2.4 shows how the determination is made.

Table 2.4: Determining satellite type by orbital position

Die Roll	Orbit 1	Orbit 2	Orbit 3	Orbit 4	Orbit 5
1	Asteroids	Asteroids	Asteroids	Asteroids	Planet
2	Asteroids	Planet	Asteroids	Planet	Planet
3	Planet	Planet	Asteroids	Planet	Planet
4–10	Planet	Planet	Planet	Planet	Planet

Next, the game determines the size of each planet as shown in Table 2.5. Finally, the game assigns a mineral richness value—low, medium, or high—to each planet and asteroid field based on the spectral class of the satellite's star (Table 2.6).

Note No star system can be composed entirely of asteroid fields. If this occurs, the game changes the outermost asteroid field into a planet.

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Table 2.5: Determining planetary size

Die Roll	Planet Size
1–3	Small
4–7	Medium
8–9	Large
10	Huge

Table 2.6: Determining the mineral richness of satellites

Die Roll	Spectral Classes							
	Red Giant	Blue Giant	White Dwarf	Blue	White	Yellow	Orange	Red Dwarf
1	Low	Low	Low	Low	Low	Low	Low	Low
2	Low	Med.	Low	Low	Low	Med.	Low	Low
3	Low	Med.	Med.	Low	Med.	Med.	Low	Low
4	Low	Med.	Med.	Med.	Med.	Med.	Low	Low
5	Low	High	Med.	Med.	Med.	Med.	Med.	Low
6	Low	High	High	Med.	Med.	Med.	Med.	Low
7	Low	High	High	High	Med.	Med.	Med.	Low
8	Low	High	High	High	High	Med.	Med.	Low
9	Med.	High	High	High	High	High	Med.	Low
10	High	High	High	High	High	High	High	Med.

DETERMINING X-COM AND ALIEN STARTING POSITIONS

You start each game with a single base and three outpost systems already established. Once the universe is generated, the game analyzes the distribution of stars to determine reasonable starting locations for X-COM. The outposts are placed first. When the game analyzes the possible starting positions, it searches for three potentially lucrative star systems in close proximity to each other, taking the following factors into consideration:

- Number of satellites (more is better)
- Mineral richness of each satellite (higher is better)
- Presence of asteroid fields (systems with asteroid fields are much more lucrative, especially if there are lots of satellites)
- Proximity of other potentially valuable star systems

Using these standards, the game determines the best three star systems in relatively close proximity to one another and places your initial outposts in these systems. Your initial base is then placed near these systems, where it is close enough to provide adequate defense for and receive supply shipments from the outposts (see Figure 2.1.)

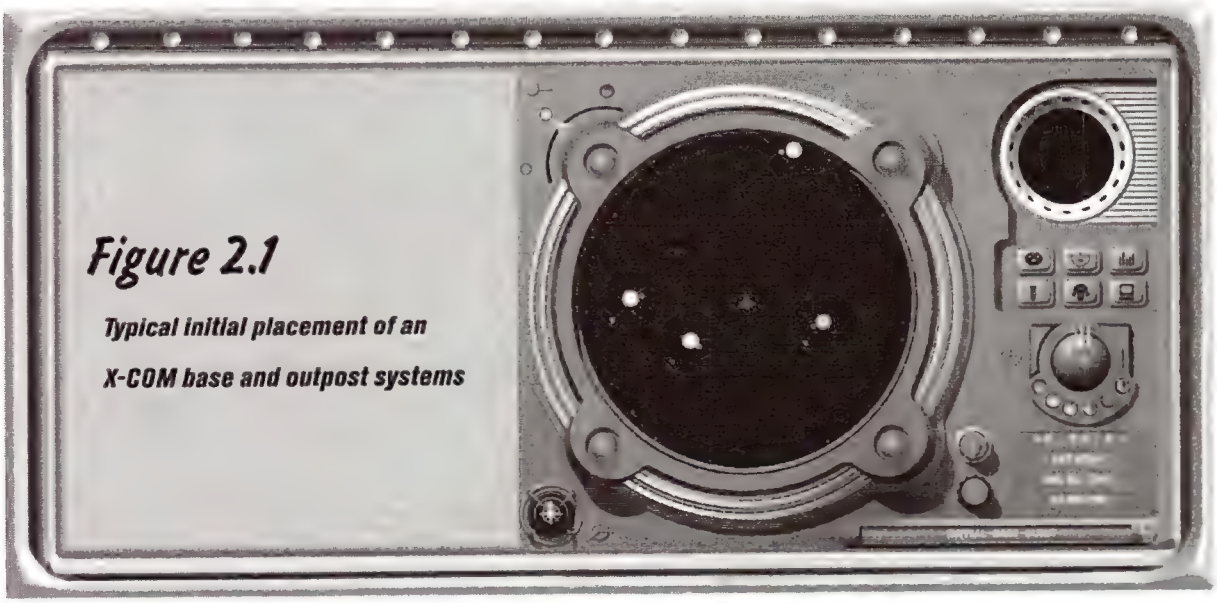


Figure 2.1

Typical initial placement of an X-COM base and outpost systems

The aliens start the game with an advantage. Instead of a single base and three outposts, the aliens start the game with *two* bases and *six* outposts. The aliens' starting position is determined in much the same way as the player's, except that the primary factor in alien

initial placement is the distance from the player's starting position. The aliens always start the game *at least* one parsec (a little over three light-years) away from the player's first base.

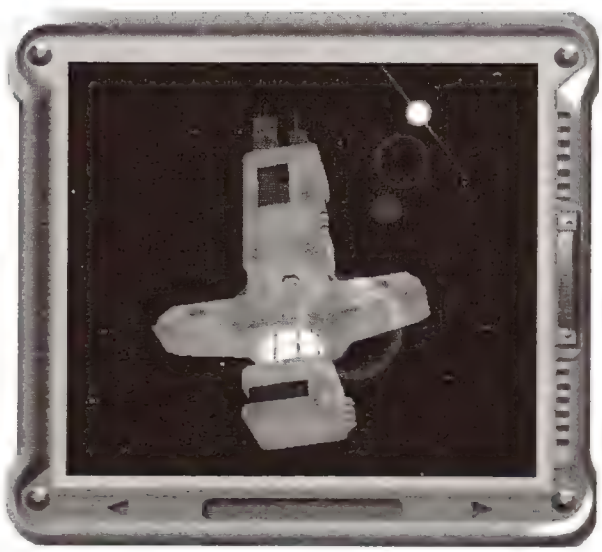
THE ROLE OF OUTPOSTS AND OPPS

The key to the entire financial system in *Interceptor* is the relationship between X-COM and the corporate outposts in the Frontier. Without these outposts, there is no way you can hope to survive.

The following sections describe the varied role that outpost systems play in the campaign game.

OUTPOSTS AS FUNDING ORGANIZATIONS

Outposts are orbital facilities that Earth corporations have established in Frontier star systems to gather raw materials for shipment back to Earth. Each outpost controls a series of ore processing plants (OPPs), one in orbit around each planet—or four inside the orbit of each asteroid field—in the outpost system. These facilities collect and process the raw materials for their individual satellite.



In exchange for your protection, each outpost system contributes a portion of its monthly profits to X-COM. This is how you get the money you need to continue your operations and ultimately foil the aliens' evil plan. If you do a good job protecting an outpost, the outpost might increase X-COM's percentage of the system's monthly take. In fact, if you are doing a good job across the board, the corporations back on Earth might take note of how safe things are out there in space and establish operations of their own in the Frontier.

If, on the other hand, you fail to adequately protect an outpost system, it is likely that the outpost will *reduce* its monthly funding contribution. If your poor performance continues, no new outposts will be established and eventually existing outposts might start shutting down. This is not a situation in which you want to find yourself!

The particulars of outpost funding are discussed under "Income" and "Expenses" later in this chapter.

OUTPOSTS AS SUPPLY DEPOTS AND RECRUITMENT STATIONS

Veterans of *X-COM UFO Defense* and *X-COM Terror from the Deep* might recall that, in those games, it was still quite possible to continue X-COM operations even if all the contributing nations of the world cut off their funding. All you had to do was build and sell weapons and equipment and you could turn a tidy profit without relying on outside help.

In *Interceptor* things are a little bit different. Sure, you can still get by on equipment sales when it comes to money, but if all the corporate outposts throw up their hands in disgust and leave the Frontier, you have a bigger concern than just cash.

In addition to acting as your primary funding source, outposts are your *only* source of supplies, manufactured equipment, and personnel. Earth is a long way from the Frontier—by the time a supply ship made the trip from home, the supplies on board would be obsolete! So, the outposts provide a local source for all your equipment needs.

Each outpost has a stockpile of standard-issue equipment that you can purchase at any time. Outposts also maintain a staff of dedicated engineers who are ready to produce manufactured equipment on command. Finally, outposts maintain a constantly rotating pool of pilot candidates just waiting to serve a tour of duty with X-COM.

As you can see, outposts are pretty important! Now you know why you have to protect them at all costs. (Details on supplies and manufacturing can be found later in this chapter.)

INCOME

The importance of maintaining a steady income throughout the campaign cannot be overstated. But just where does all the money come from and what can you do to make sure your sources don't dry up? The next few sections explain just that, and provide you with the information you need to keep the books balanced—or at least find out why they're not.

STARTING TREASURY

It seems like the moment you get to the Frontier you can already think of a dozen ways to spend money. This would be a real problem if you had to wait until the corporate outposts anted up at the beginning of the second month. Luckily for you, you don't start out empty-handed.

The amount of money in your treasury at the start of the game varies according to game difficulty. Table 2.7 shows X-COM's starting treasury for each game difficulty level.

Table 2.7: X-COM's starting treasury for each difficulty level

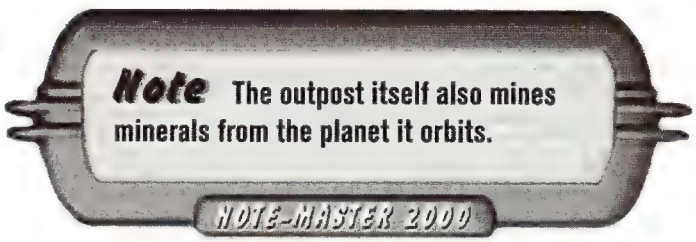
Difficulty	Starting Treasury
Beginner	$5,000,000
Experienced	$4,750,000
Veteran	$4,500,000
Genius	$3,750,000
Superhuman	$3,000,000

OUTPOST CONTRIBUTIONS

The amount of income you receive each month from the corporate outposts in the Frontier depends on a lot of things. As a general rule, the base income received from outpost systems with lots of satellites is higher than that received from outpost systems with few satellites, but there are a number of factors that can affect this.

GROSS SYSTEM YIELD

The gross yield for each outpost system is determined by the size and mineral richness of its planets and asteroid fields. As you might recall, these are two of the random factors decided at the start of the game when the universe is created. The higher the mineral richness and the larger the planet, the more raw materials the OPPs can extract each month.



To calculate the gross monthly yield of an outpost system, the raw material output of each OPP in the system and the outpost itself are added together. Table 2.8 shows the number of kilotons of raw materials mined each month for each satellite type.

Table 2.8: Kilotons of raw materials mined each month (by satellite type and mineral richness)

Mineral Richness	Small Planet	Medium Planet	Large Planet	Huge Planet	Asteroid Field *
Low	200	400	600	800	800
Medium	300	600	900	1200	1200
High	400	700	1000	1300	1600

* This amount is mined by each of the four OPPs in the asteroid belt.

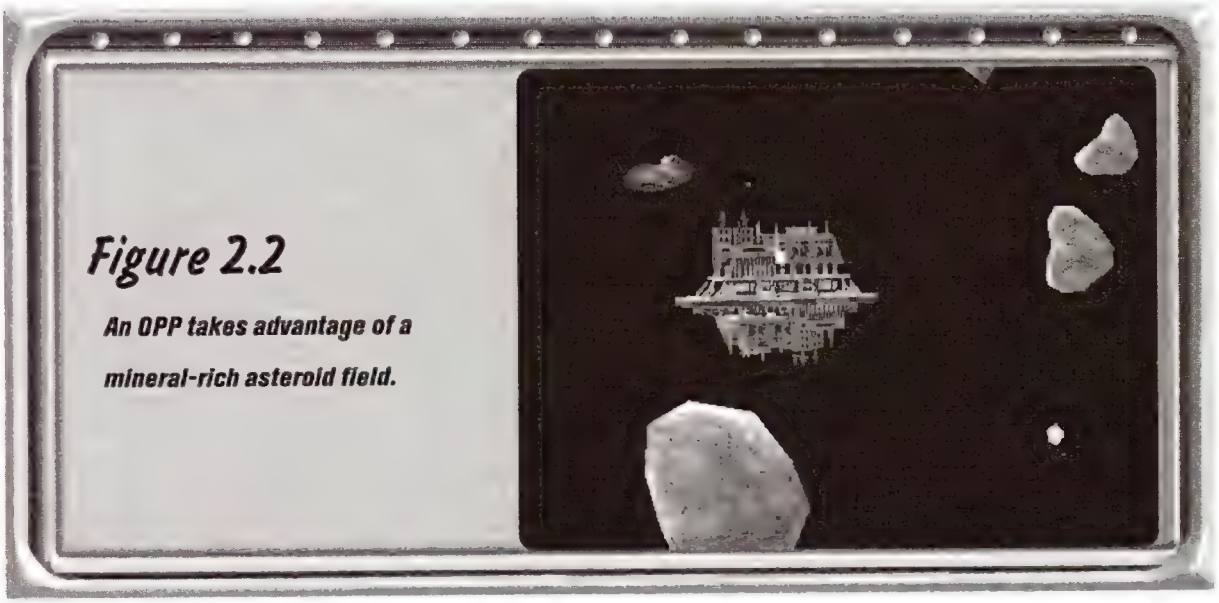


Figure 2.2

An OPP takes advantage of a mineral-rich asteroid field.

Once the monthly raw material yield is determined for each outpost system, the total is multiplied by the *exchange rate* to determine the monetary yield of the system. The exchange rate, which is the amount paid per kiloton of raw materials mined, varies depending on game difficulty, as shown in Table 2.9.

Table 2.9: Exchange rate (price per kiloton) paid for the raw materials mined by outpost systems

Difficulty	Exchange Rate
Beginner	$250
Experienced	$225
Veteran	$200
Genius	$175
Superhuman	$150

X-COM'S BASE PERCENTAGE FOR EACH OUTPOST SYSTEM

Of course, not all of the money generated by outpost systems goes to X-COM. That would be no way to run a company! Some of the profits go back to the outpost's parent corporation on Earth, and the remainder goes to X-COM. The actual percentage you receive can vary wildly from month to month depending on the circumstances, but the base amount received is calculated using the following equation:

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Base X-COM Percentage = (Gross System Yield * Exchange Rate) * .75
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This amount is calculated for each outpost system independently.

FLUCTUATIONS IN FUNDING

The amount you actually receive from your outposts each month varies based on your performance. If you perform poorly, your funding might drop. If you perform well, your funding might increase.

At the beginning of every game month, each outpost makes two calculations to evaluate your performance in the previous month:

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Alien Activity in Outpost System + (Overall Alien Activity/5)
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and

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X-COM Activity in Outpost System + (Overall X-COM Activity/10)
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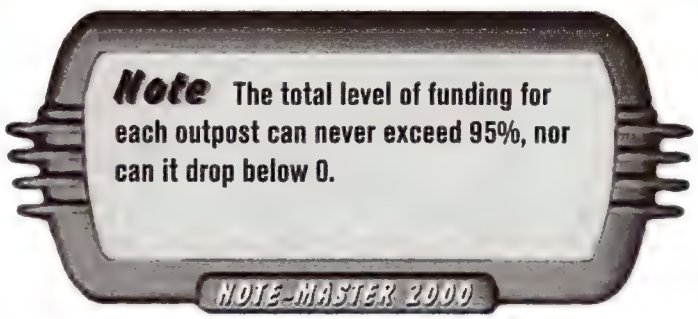
"Activity" is broadly defined as any actions that score points (positive or negative). "Activity in Outpost System" refers to events that take place within the sensor range of the system in question. "Overall Activity" refers to the amount of activity in all outpost systems combined plus the events that happen in other parts of X-COM space (as defined by sensor ranges).

Once each calculation is completed, the alien calculation is subtracted from the X-COM calculation. The result (known as the "Outpost System Evaluation") determines the monthly funding change (if any) for the evaluated outpost. Table 2.10 shows the possible results.

Table 2.10: Changes in monthly outpost contributions

Outpost System Evaluation	Change in Funding (%)
< -1001	-5 to -20
-501 to -1000	-2 to -10
-251 to -500	0 to -5
-1 to -250	0 to -1
0	No change
1 to 250	0 to +1
251 to 500	0 to +5
501 to 1000	0 to +10
>1000	+2 to +10



GAINING NEW OUTPOSTS

If your performance is exemplary in a given month, one or more Earth corporations may establish new outposts in the Frontier.

Whether new outposts are established is determined by a multi-step process. First, all your Outpost System Evaluations for the month are added together to get your "Overall Evaluation." This then determines how many die rolls for new outposts are made that

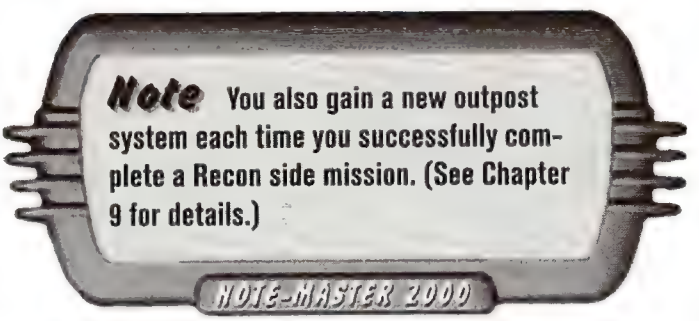
month (see Table 2.11). Finally, the die rolls are actually made to determine the number of new outposts for the month (see Table 2.12).

Table 2.11: Determining the number of die rolls attempted for new outposts

Overall Evaluation	Number of Die Rolls
<0	0
1–5	1
6–10	2
11–25	3
>25	4

Table 2.12: Determining the number of new outposts

Die Roll	Number of New Outposts
1–3	0
4–7	1
8–9	2
10	3



LOSING OUTPOSTS

There are two ways you can lose an outpost: The outpost's parent corporation can shut it down or it can be destroyed in battle. While both situations mean a total loss of funding from the outpost system in question, each situation has slightly different repercussions.

Corporations shut down outposts as a result of consistently bad Outpost System Evaluations. Each bad evaluation potentially reduces the amount of funding the player receives from that outpost each month. When an outpost's funding level drops to zero the outpost is shut down. All OPPs are removed from the system, and the parent corporation will not establish an outpost for the remainder of the game. (Of course, it is possible that some other corporation might set up an outpost in the same system at some later date, should your performance warrant it.)

When an outpost is destroyed in combat, things are a bit different. Depending on the circumstances, the outpost's parent corporation might rebuild it. If this is the case, the OPPs remain in their orbits and the new outpost comes online a number of weeks later.

LOSING OPPS

The loss of an OPP is not as financially serious as the loss of entire outpost, but it does reduce your funding to some extent and adversely affects your Outpost System Evaluation for the system in which the OPP is located.

OPPs are never individually removed from the game by a parent corporation (though they are removed if the corporation in question removes the outpost itself, as described earlier). The only way to lose an individual OPP is for it to be destroyed in combat.

> **Tip** Although the game always rebuilds destroyed OPPs, you should attempt to defend every one no matter what. Even if you have a consistently exemplary Outpost System Evaluation in a particular system, the loss of an OPP or two is all it might take to close down the entire system.
>
> TIP-O-MATIC

Every OPP destroyed means a loss of funding from that outpost system. The moment the OPP goes off-line, that portion of the system's gross system yield is lost until such a time as the OPP is rebuilt. OPPs lost in combat are always rebuilt within a few game weeks.

SCORING POINTS

As discussed in the preceding sections, your monthly evaluation is based on your score. Tables 2.13 and 2.14 break down how your score in the campaign game is affected by actions that you perform (or fail to perform) and salvage items that you recover. You're not the only one scoring points, however—the aliens do, too! As described earlier, the game compares your score to the aliens' to determine whether or not new outposts are added to the Frontier each month.

> **Note** Reverse the positive and negative values to determine alien scores.
>
> NOTE-MASTER 2000

Table 2.13: Ship- and mission-related X-COM scores

Action	Points
Alien base destroyed	4500
Alien outpost destroyed	2250
X-COM outpost successfully defended	2250
Alien base damaged (at least one base pod destroyed)	2000
Alien mining platform destroyed	1000
X-COM OPP successfully defended	1000
Alien freighter captured	250
Alien Shade captured	200
Alien Phantasm captured	175
Alien freighter destroyed	150
Alien Shade destroyed	150
Alien Spectre captured	150
Alien Phantasm destroyed	125
Alien Wraith captured	125
Alien Spectre destroyed	100
Alien Wraith destroyed	75
Alien probe destroyed	50
Alien drone destroyed	10
Alien mine destroyed	10
X-COM probe destroyed	-50
Lightning II interceptor destroyed	-100
Firestar interceptor destroyed	-125
Super Avenger interceptor destroyed	-150
Lightning II captured	-200
Firestar captured	-225
Super Avenger captured	-250
X-COM freighter destroyed	-250
X-COM freighter captured	-350
Refusal to respond to call for freighter defense	-500
Refusal to respond to call for OPP defense	-1000
OPP destroyed	-1200
Refusal to respond to call for outpost defense	-1500
X-COM base damaged (at least one module destroyed)	-2000
Outpost destroyed	-2450
X-COM base destroyed	-5000

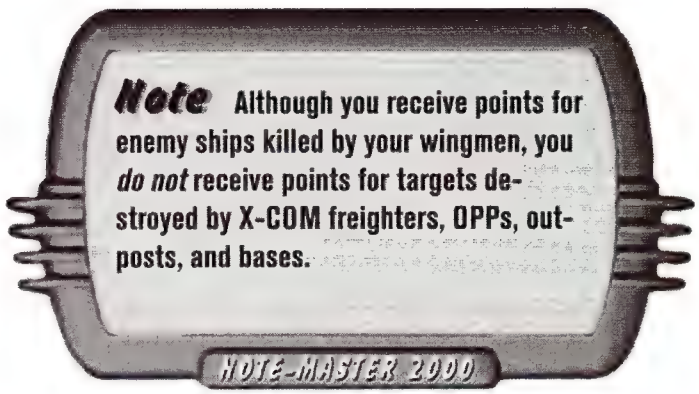


Table 2.14: Points for salvage items returned from battle sites

Item Recovered	Points
Accumulator Shield	35
Advanced Autonomous Targeting System (AATS)	30
Advanced ECM Pod	20
Aereon (corpse)	10
Cloaking Device	25
Conversion Drive	20
Deflector Shield	10
Dimension Jump Drive	30
Doomsday component (any)	50
Doppelganger Missile	20
Doppelganger Missile Launcher	5
ECM Pod	15
Electroplasmic Shield	20
Elerium Torpedo	10
Elerium Torpedo Launcher	5
Emissions Targeting System	20
Enveloping Fusion Torpedo	15
Enveloping Fusion Torpedo Launcher	5
Ethereal (corpse)	5
Fusion Missile	15
Fusion Missile Launcher	5
Gatling Laser	15
Graviton Pulse Drive	30
Gravity/Induction Drive	25
Heavy Laser	20
Laser Cannon	10

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Item Recovered	Points
Muton (corpse)	2
Nova Bomb	100
Nova Bomb Launcher	25
Parallax Torpedo	15
Parallax Torpedo Launcher	5
Passive Cloaking Torpedo	15
Passive Cloaking Torpedo Launcher	5
Permeator Missile	12
Permeator Missile Launcher	5
Phase Cannon	15
Plasma Pulse Cannon	25
Psi Blaster	40
Psilord (corpse)	10
Sectoid (corpse)	2
Sidestep Missile	12
Sidestep Missile Launcher	5
Ship Damage Control Computer	20
Standard Targeting System	15
Tachyon Pulser	30
Tracer Cannon	27
Tracking Tracer Cannon	33
Tractor Beam	15
Trans-Dimensional Shield	30
Vector Control Thrusters	20
X-Winder Missile	10
X-Winder Missile Launcher	5

YOUR SCORE RATING

On each monthly report, the game rates your performance based on your current score. Table 2.15 shows the score ranges for each rating.

Table 2.15: Your monthly score rating

Rating	Score
Phenomenal	>75,000
Excellent	50,000 to 75,000
Very Good	35,000 to 49,999
Good	15,000 to 34,999
OK	0 to 14,999

Rating	Score
Below Average	-5,000 to -1
Poor	-15,000 to -5,001
Awful	-25,000 to -15,001
Dismal	< -25,000

ALTERNATE FORMS OF INCOME

Although the funding you receive from outpost systems is your primary source of income, there are a couple of ways to make a few bucks on the side.

REWARDS FOR SIDE MISSIONS

From time to time in *Interceptor,* you'll get the opportunity to participate in side missions, which have little or no direct bearing on your overall strategic situation but may pay off in other ways—such as in cash. When you're right in the middle of a campaign, you may be tempted to ignore these quests in favor of the big picture. There's no denying that the defense of your outpost systems must take precedence over most side missions, but if you have the time and the resources, these deviations from the main course of the game can be just what you need to boost your treasury.

See Chapter 9 for complete descriptions of the side missions and their respective rewards.

YARD SALES

The second alternate finance method available to you is the sale of surplus (and not-so-surplus) equipment. Veteran X-COM commanders will no doubt be aware that there has always been a healthy demand on the open market for any equipment and weapons you may be willing to part with. Rest assured, the market is just as lucrative as ever. Almost every piece of equipment you can purchase or manufacture will net you something of a profit when you opt to sell.

Table 2.16 lists all the equipment in the game along with a purchase/manufacture price, sale price, and net profit for each.

Table 2.16: Equipment sale prices

Item	Purchase/ Manufacture Price ($)	Sale Price ($)	Net Profit ($)
Accumulator Shield	N/A	350,000	350,000
Advanced Autonomous Targeting System (AATS)	100,000	160,000	60,000
Advanced ECM Pod	75,000	89,000	14,000
Alien Corpse (any)	N/A	100	100
Cloaking Device	100,000	195,000	95,000
Conversion Drive	80,000	85,000	5,000
Deflector Shield	75,000	74,500	-500
Doppelganger Missile	95,000	125,000	30,000
Doppelganger Missile Launcher	160,000	165,000	5,000
Dimension Jump Drive	N/A	200,000	200,000
ECM Pod	45,000	57,500	12,500
Electroplasmic Shield	90,000	100,000	10,000
Elerium Torpedo	10,000	12,500	2,500
Elerium Torpedo Launcher	160,000	165,000	5,000
Emissions Targeting System	85,000	100,000	15,000
Enveloping Fusion Torpedo	28,000	31,500	3,500
Enveloping Fusion Torpedo Launcher	242,000	247,000	5,000
Fusion Missile	32,000	35,000	3,000
Fusion Missile Launcher	210,000	215,000	5,000
Gatling Laser	250,000	279,000	29,000
Graviton Pulse Drive	185,000	210,000	25,000
Gravity/Induction Drive	145,000	157,500	12,500
Heavy Laser	275,000	297,000	22,000
Hunter Probe	85,000	87,000	2,000
Laser Cannon	182,000	195,500	13,500
Nova Bomb	350,000	600,000	250,000
Nova Bomb Launcher	250,000	255,000	5,000
Parallax Torpedo	17,000	22,000	5,000
Parallax Torpedo Launcher	160,000	165,000	5,000
Passive Cloaking Torpedo	14,000	18,000	4,000
Passive Cloaking Torpedo Launcher	165,000	170,000	5,000
Permeator Missile	14,000	16,000	2,000
Permeator Missile Launcher	170,000	175,000	5,000
Phase Cannon	300,000	475,000	175,000
Plasma Pulse Cannon	190,000	200,000	10,000
Psi Blaster	325,000	660,000	335,000
Sensor Probe	65,000	64,500	-500
Ship Damage Control Computer	85,000	96,000	11,000

Item	Purchase/ Manufacture Price ($)	Sale Price ($)	Net Profit ($)
Sidestep Missile	16,000	18,500	2,500
Sidestep Missile Launcher	155,000	160,000	5,000
Standard Armor	25,000	25,500	500
Standard Targeting System	65,000	64,500	-500
Tachyon Pulser	195,000	300,000	105,000
Tracer Cannon	225,000	300,000	75,000
Tracking Tracer Cannon	300,000	375,000	75,000
Tractor Beam	95,000	110,000	15,000
Trans-Dermal Armor	85,000	93,000	8,000
Trans-Dimensional Shields	125,000	200,000	75,000
Tri-Titanium Armor	50,000	65,500	15,500
Vector Control Thrusters	55,000	75,000	20,000
X-1A Lightning interceptor	Special	Special	Varies
X-2 Firestar interceptor	Special	Special	Varies
X-3 Super Avenger interceptor	Special	Special	Varies
X-Winder Missile	9,000	9,500	500
X-Winder Missile Launcher	16,000	16,500	500

There is a catch to selling weapons and equipment in *Interceptor* that did not exist in the previous X-COM games. The anonymous bidder to whom you sell all your equipment is actually a black-market arms dealer who (occasionally) sells your equipment to the aliens. Yup—that means that the missile you sell today could be hurtling back at you at high velocities tomor-

Note Interceptor purchase/manufacture prices are based on what they're equipped with at the time of purchase. (Interceptor stock prices are explained later in this chapter.) The sale price of an interceptor is determined by adding the cost of all installed components to the price of the hull and multiplying the result by .8. There is little to no profit in selling interceptors.

NOTE-MASTER 2000

Tip X-COM interceptors, Nova Bombs, and Nova Bomb Launchers are never given to the aliens. This makes them the only truly "safe" items you can sell.

TIP-O-MATIC

row. (You might have the opportunity to track down and destroy this arms dealer in a side mission. See Chapter 9 for details.)

EXPENSES

So now you see how the money comes in. But what happens to it? There never seems to be enough! One word: expenses.

Besides buying ships, weapons, equipment, base modules, and all the other items you need to keep the war effort going, you're assessed a number of ongoing expenses at the end of every month. All of these are added together and subtracted from your gross monthly income to determine your net profit. The next few sections describe these expenses.

BASE MAINTENANCE

X-COM bases are huge structures that require lots of maintenance. The more modules you add to a base, the more complex—and expensive—it becomes. Each and every module on every base incurs a maintenance fee that is subtracted from your gross income each month. (The maintenance fees for each module type are listed in Chapter 4.)

Tip **Make sure that you are using all the base modules you install, and dismantle those that you don't need. For example, if all the pilots at a particular base are highly skilled, that base probably doesn't need a Training Module. When you remove a base module its materials are sold for scrap. You only get half the module's original price in return, but that and the monthly savings in maintenance can help you out financially.**

TIP-O-MATIC

SHIP MAINTENANCE

In addition to base module upkeep, you have to pay for the wear and tear you put on your interceptors. A monthly maintenance fee is exacted for each of your interceptors to pay for the crews who bang out the dents, spot paint those spiffy

Tip **Build your fleet at a steady but sane pace based on the amount of alien activity you are experiencing. Don't build Hangar Modules on every base and fill them with ships unless there is really a need to do so. The up-front expense is astronomical and the monthly maintenance will take its toll. There is also no need to upgrade all your ships to the newest model available if the current model is doing the job.**

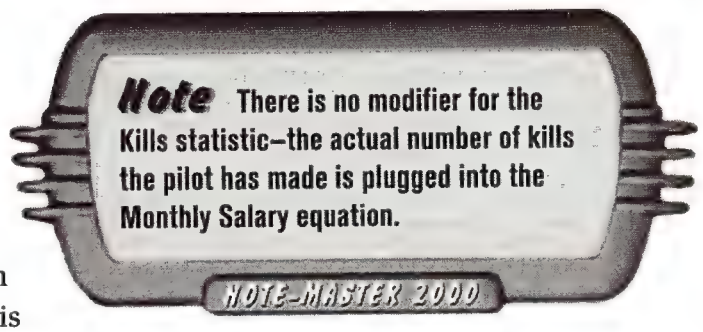
TIP-O-MATIC

logos, and basically keep your ships in fighting condition. (Details on ship upkeep fees can be found in Chapter 5.)

PILOT SALARIES

The third and final regular expense is your payroll. Every X-COM pilot commands a monthly salary. As in real life, the pilot's salary is based on his or her level of skill and experience. Nine pilot attributes and statistics are taken into account when salary is calculated:

- Rank (rnk)
- Intelligence (int)
- Stamina (sta)
- Firing Accuracy (fac)
- Flying Ability (fly)
- Aggressiveness (agr)
- Bravery (brv)
- Psionics (psi)
- Kills (kil)



Each statistic (with the exception of Rank and Kills) is a number between 0 and 100. A modifier for each statistic is used in the following equation to determine each pilot's Monthly Salary:

```
Monthly Salary=($48,000+(rnk+int+sta+fac+fly+agr+brv+psi+kil))/12
```

The modifiers used in the equation are shown in Tables 2.17 through 2.24. As you can see, pay raises for Frontier pilots are automatic. As their skills increase through experience, they command higher salaries.

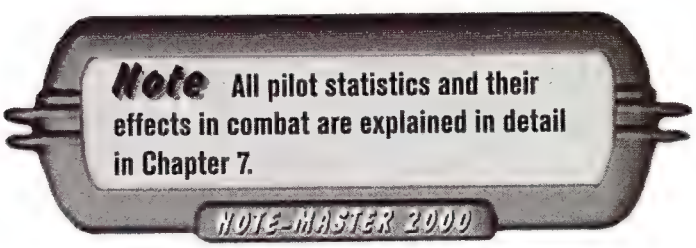


Table 2.17: Modifiers for Rank (rnk)

Rank	Modifier ($)
Rookie	-1000
Ensign	-500
Lieutenant	0
Lt. Commander	+750
Commander	+1500

Table 2.18: Modifiers for Intelligence (int)

Intelligence	Modifier ($)
50–60	0
61–70	+100
71–80	+200
81–90	+300
91–100	+400

Table 2.19: Modifiers for Stamina (sta)

Stamina	Modifier ($)
50–60	-100
61–70	0
71–80	+100
81–90	+150
91–100	+200

Table 2.20: Modifiers for Firing Accuracy (fac)

Firing Accuracy	Modifier ($)
25–30	-300
31–40	-100
41–50	0
51–60	+200
61–65	+250
66–70	+300
71–75	+350
76–80	+400
81–85	+500
86–90	+600
91–95	+700
96–100	+800

Table 2.21: Modifiers for Flying Ability (fly)

Flying Ability	Modifier ($)
25–30	–150
31–40	–75
41–50	0
51–60	+100
61–65	+150
66–70	+200
71–75	+250
76–80	+300
81–85	+400
86–90	+500
91–95	+600
96–100	+700

Table 2.22: Modifiers for Aggressiveness (agr)

Aggressiveness	Modifier ($)
25–30	–100
31–40	–50
41–50	0
51–60	+100
61–65	+150
66–70	+200
71–75	+150
76–80	+100
81–85	+50
86–90	0
91–95	–50
96–100	–100

Table 2.23: Modifiers for Bravery (brv)

Bravery	Modifier ($)
25–30	–150
31–40	–100
41–50	–50
51–60	0
61–65	+50
66–70	+100

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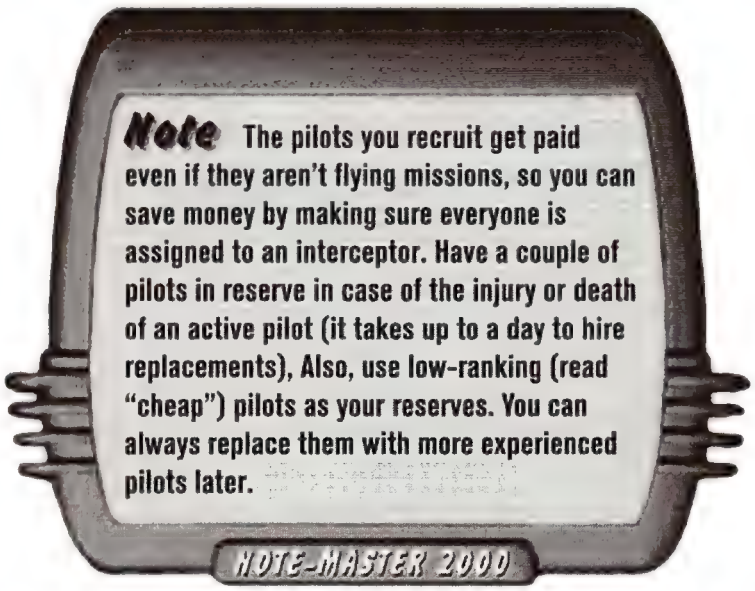
Bravery	Modifier ($)
71–75	+150
76–80	+200
81–85	+250
86–90	+300
91–95	+350
96–100	+400

Table 2.24: Modifiers for Psionics (psi)

Psionics	Modifier ($)
0–15	0
15–20	+200
21–25	+300
26–30	+400
31–40	+500
41–50	+600
51–60	+700
61–65	+800
66–70	+900
71–75	+1000
76–80	+1100
81–85	+1300
86–90	+1500
91–95	+1700
>95	+1900



PURCHASING AND MANUFACTURING

Most space combat games let you coast through mission after mission with no regard to the toll the war is taking on your forces. Oh, not the loss of *life*. Sure, that's bad and all. But what about the *money*? Those missiles you fire with such reckless abandon cost a pretty penny, you know. Who's gonna pay for that?

Interceptor drives this point home—big time. Not only is it your responsibility to fly the ships—in this game you've also got to *buy* the ships! Luckily, the mechanics of the system are pretty straightforward—all the "how-tos" are covered in the manual—but if you want to make informed decisions, it's always helpful to know the particulars of what goes on behind the scenes.

MANUFACTURING—HOW IT WORKS

Each of the corporate outposts in the Frontier maintains a staff of engineers who are on call day and night to build equipment for X-COM. The number of engineers per outpost varies by star system—the more OPPs a system has, the more engineers there are. The exact number is calculated using the following equation:

```
Number of Technicians = 10 + (10 * Number of OPPs)
```

You can check the number of available technicians in an outpost at any time by consulting the Outpost Data Report.

THE PRODUCTION QUEUE

When a manufacturing order is placed, the selected items are placed in the Production Queue in the order in which they were requested, and engineers are automatically assigned to produce them. The list of items in the Queue appears at the top of the screen (see Figure 2.3). Listed for each item, from left to right, are the number ordered and the number produced to date ("O/P"), and the percentage of the total outpost workforce currently assigned to the project ("WF").

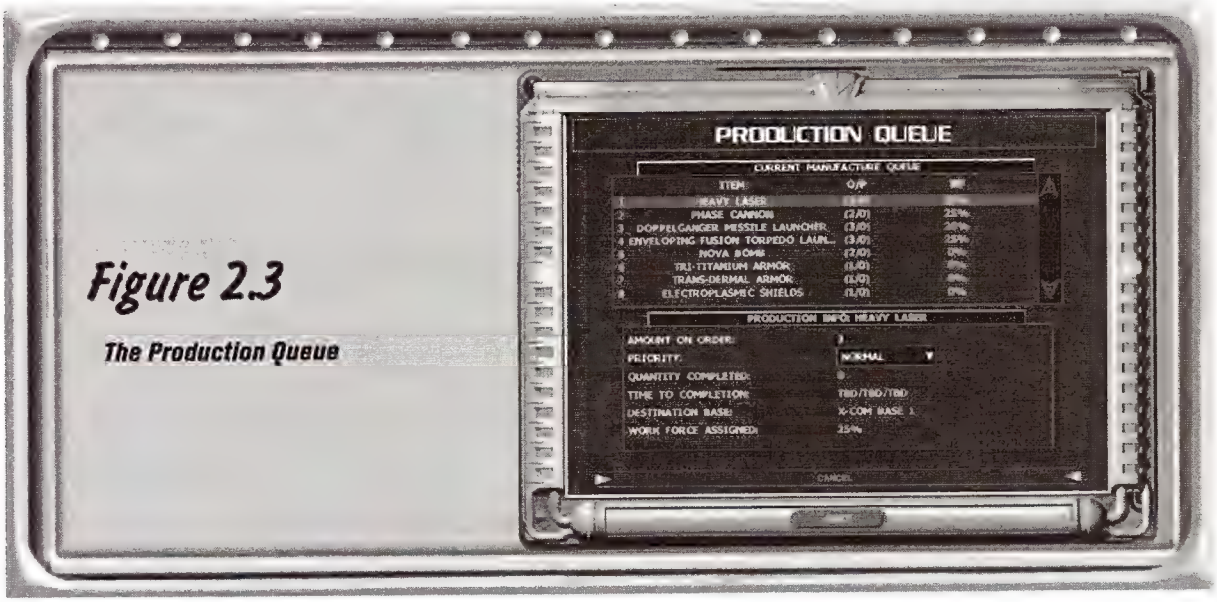


Figure 2.3
The Production Queue

By clicking an item in the Production Queue, you can get more detailed information (shown at the bottom of the screen), including the time to project completion and the base to which the order will be shipped. More importantly, this portion of the Queue includes a control that allows you to change the priority of the selected project.

CHANGING PRODUCTION PRIORITY

Interceptor's production system is a cooperative effort. When there are items in the Production Queue, all the engineers at all the outposts in the Frontier work simultaneously to fill your order. (Ain't telecommuting grand!) By default, the engineers spread themselves as evenly as possible over all the projects in the Queue, starting at the top of the list and working their way down. For example, if four items are placed in the Queue, 25% of the workforce is assigned to each, but if only one item is placed in the Queue 100% of the workforce is allocated to that item. Although there isn't a lot of micromanaging involved in the process, you do have some control over the order in which your items are produced and the attention they receive.

First, you can move any item to the top of the Queue by simply clicking on it and dragging it up the list. When you drop it at the top of the list, this item will be the first to be produced. All other items move down the list and the workforce is juggled accordingly. Similarly, to move a production item to a position of lesser importance, you can drag it *down* the list.

A more precise way to ensure that an item is produced as quickly as possible is to change its priority. When an item is highlighted, you can directly control the percentage of the workforce dedicated to its production. Simply select one of the four available priority levels from the drop-down list:

- **Low:** Allocates 10% of the workforce to the item's production
- **Normal:** Allocates 25% of the workforce to the item's production
- **High:** Allocates 50% of the workforce to the item's production
- **Urgent:** Allocates 100% of the workforce to the item's production

Tagging an item as Urgent automatically moves it to the top of the Queue—unless other Urgent production items reside on the list above it. This is the only case where changing priority causes an item to move up the list. Otherwise, the items remain in the Queue in the order in which they were originally added (unless they are dragged to a new position).

Tip **Make sure that your workforce numbers add up to 100% after you finish juggling things around. If you have three items in the Queue and all are tagged as Low priority, only 30% of your workforce will work to produce the items (10% per item). As the workforce percentage is increased or decreased, engineers are automatically removed from or added to other projects in the Queue.**

TIP-O-MATIC

You can get a more specific idea of how quickly manufactured items are produced at each percentage rate by looking at each item's Manufacture Time statistic. This stat is measured in man-hours. To

determine how many game hours an item will take to manufacture, first find the number of engineers in your manufacturing pool, multiply this number by the priority setting, and divide the item's Manufacture Time by the result. (The Manufacture Times for all items in the game are listed in Chapter 5.)

> **Tip** Left to its own devices, the game will always tag multiple production items with a "Normal" priority. When the items are small, this is relatively efficient. However, when you really need that new Super Avenger, you definitely want more than just 25% of the available engineer force building it--especially if you only have a small number of outpost systems.
>
> TIP-O-MATIC

The fact that every OPP adds engineers to your production pool is yet another good reason for keeping these facilities safe. Every OPP you lose means a loss of 10 engineers. If that happens too often, your production will slow significantly.

RECRUITING PILOTS

Another expense related to the ordering process is pilot recruitment. In addition to their monthly salary, each pilot commands a Recruitment Fee. This fee is calculated using most of the same characteristics used to calculate the pilot's monthly salary (see "Pilot Salaries," earlier in this chapter, for details), except that the Kills statistic is ignored and a modifier is applied for the pilot's Health (hea).

The Recruitment Fee is determined by the following equation:

```
Recruitment Fee = $10,000 +($24,000+(rnk+int+sta+fac+fly+agr+brv+psi+hea))
```

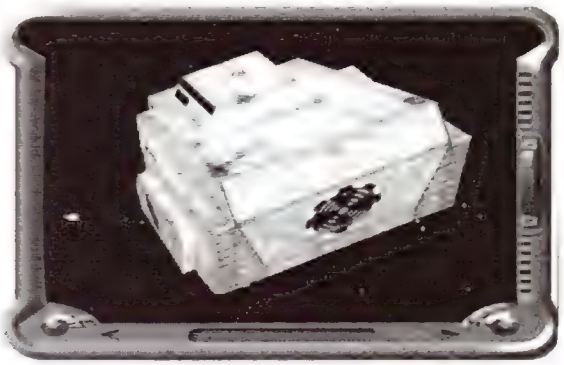
To see the modifiers for the first eight statistic scores in the Recruitment Fee equation, refer back to Tables 2.17 through 2.24. The Health modifiers are shown in Table 2.25.

Table 2.25: Recruitment Fee modifiers for Health

Health	Modifier ($)
5	-50
6-10	0
11-15	+100
16-20	+200
>20	+300

FREIGHTERS AND CARGO DELIVERY

Once your equipment has been purchased or manufactured, it has to get to your bases. This is accomplished via a fleet of state-of-the-art freighters, one of which is stationed at each outpost. As purchase and production orders are filled, the equipment is loaded onto a freighter and delivered to the base that ordered it. The system the game uses to determine which outpost provides the delivery service and to divide items among freighters for large shipments bears explaining.



HOW EQUIPMENT IS SHIPPED

Note Interceptors are not shipped on freighters. They fly to your base under their own power, piloted by a corporate pilot.

NOTE-MASTER 2000

Every item in the game is measured in Cargo Space Units, or CSUs. (The sizes in CSUs of every item in the game are listed in Chapter 5.) Each freighter can carry up to 100 CSUs of equipment. When items are ordered or when their manufacture is completed, they are loaded onto a freighter at the outpost nearest the base that ordered them and shipped. If there is more equipment on order than can be handled by a single freighter, the next nearest outpost ships the surplus, then the next, and so on.

A freighter only carries cargo destined for a single base during each trip. If there is only one outpost serving multiple X-COM bases and there are items on order at every base, the freighter will complete its deliveries to one base before it starts delivering cargo to the next, *regardless of the available cargo space on the freighter*. In other words, if Base One has 40 CSUs worth of cargo on order and Base Two has 20, a single freighter would make two trips: to Base One and back, then to Base Two and back.

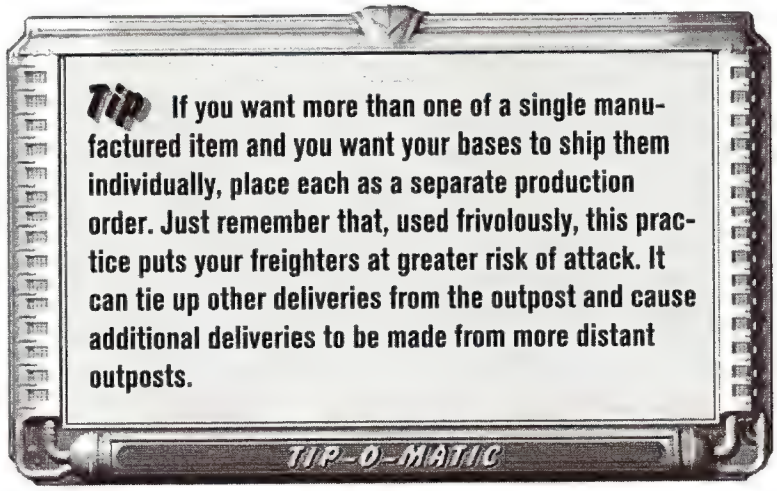
Note Newly recruited pilots are transported by freighter as well. For transportation purposes, they occupy one CSU.

NOTE-MASTER 2000

Freighters are free to mix and match shipments of purchased goods, manufactured goods, and pilots if all are available for shipment and destined for the same base. However, freighters never delay the shipment of an available item to a base in favor of waiting to fill their holds. For example, let's say you order ten X-Winder Missiles, recruit a new pilot, and order the manufacture of

five Cloaking Devices in the same ordering session. The missiles and the pilot are available immediately, so they are shipped out on the next freighter. The Cloaking Devices take a while to build, so the outpost ships them on a later flight.

By the same token, multiple manufactured items of the same type are never split up, nor are they delayed to await the completion of additional manufactured items destined for the same base. For example, say you order the manufacture of three Elerium Torpedoes and four Vector Control Thrusters. The missiles are first in the Queue and they take less time to build, so they are completed first. As soon as *all three* torpedoes are completed, the outpost ships them to your base aboard a freighter. The VCTs are shipped at a later date when *all four* of them are complete.



HIRING FREIGHTER ESCORTS

Every time you place a purchase or production order, you can opt to hire an escort to protect the freighter during its delivery run. The escort consists of one or more interceptor craft flown by corporate pilots. These pilots, while not the best in the galaxy, are adequately trained and can make all the difference in the world if the convoy is attacked and your own pilots are currently indisposed.

The cost of hiring an escort is 10% of the total order. If you choose to hire the escort, this additional amount is subtracted from your treasury along with the price of the goods ordered.

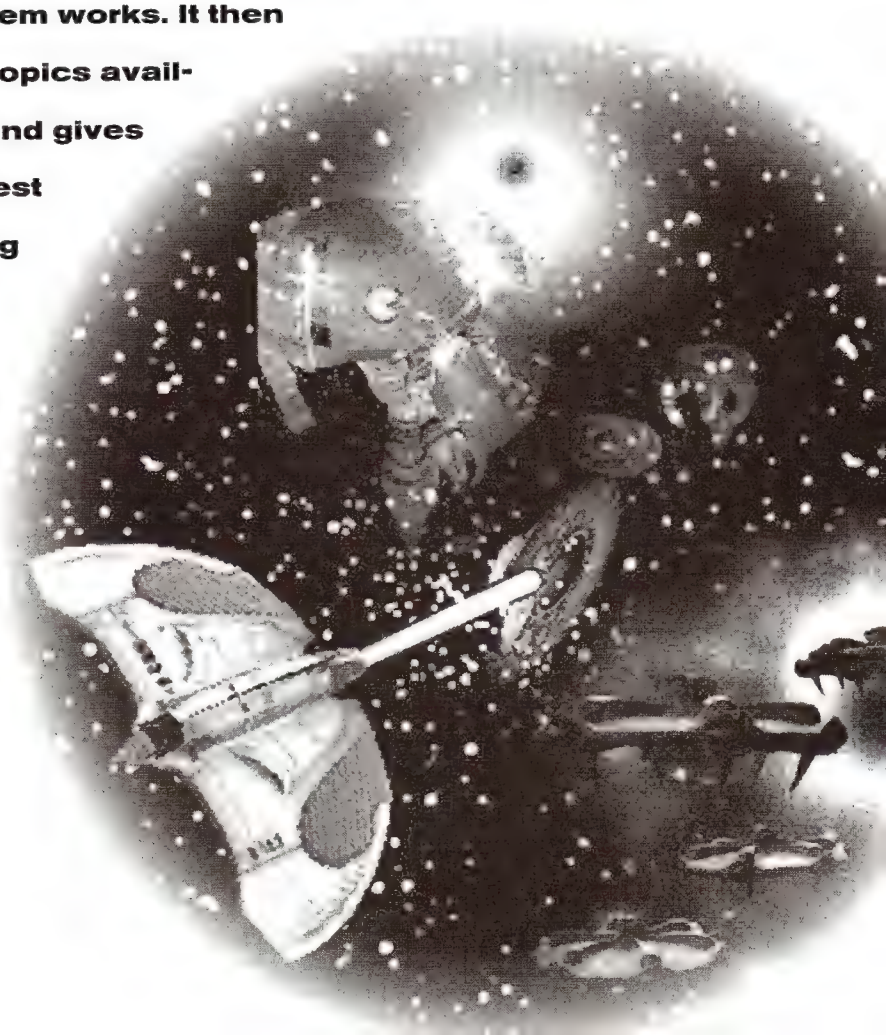
While escorts are seldom necessary early in the game or when your outposts are all extremely close to X-COM bases, they are more than worth the investment on long journeys and when the cargo aboard the freighter is extremely expensive or urgently needed.

Chapter 3

RESEARCH

ERHAPS THE MOST IMPORTANT ASPECT of the strategy portion of *Interceptor* is the research and development of new technologies. At the beginning of the game, the aliens have an edge on you in all areas—ship design, armor, shields, weapons...the list goes on and on. It is up to you to make sure that the technology gap narrows steadily as the game progresses. If you fail, the aliens will eventually be so far ahead of you that you won't be able to adequately defend yourself.

This chapter first gives you a full understanding of how *Interceptor*'s research system works. It then describes all the research topics available throughout the game and gives you some insights on the best path to follow when climbing the research tree.



HOW IT ALL WORKS

Those familiar with the research systems in previous X-COM games will notice that there are a lot of changes this time around. The end results are pretty much the same, but the methods used are quite different.

DOWNLINKS AND DATA TRANSFER

There are no scientists stationed on X-COM bases in the Frontier—it's far too dangerous in deep space to risk sending Earth's most talented scholars to live and work there! All research on new technologies is performed in the Earthbound laboratories of the Galactic Science Corps (GSC). When alien artifacts and transmissions are collected in the Frontier, examples are sent back to the GSC for analysis. Once in GSC possession, these items become available to you as new research topics. You can browse through the currently available topics on the Research screen (see the game manual for details).

When you select the research topic you want, it is transmitted from Earth to the Downlink Modules installed on your bases (see Figure 3.1). Downlinks are, essentially, giant modems that download research information from the GSC data banks on Earth and store the information in X-COM's computers in the Frontier.

Figure 3.1

Standard Downlink Modules in operation

The speed at which topics are downloaded depends on several factors. The first is file size. Each research topic's file size is measured in "teraquads" (TQs). The larger the file size, the longer it takes to download. (File sizes for each research topic are listed later in this chapter.)

The second factor affecting download speed is the number of Downlinks installed on the base. Each X-COM base can download one research topic at a time. Each base can have up to three Downlink Modules, and the more it has, the higher the download rate. Obviously, it is to your advantage to employ a full complement of Downlinks at each of your bases if possible. The more Downlinks you have, the faster you gain new knowledge and technology.

Finally, the type of Downlink in use comes into play. There are three Downlink models available in the game, two of which do not become available until certain technologies are researched. The more advanced the Downlink, the faster the download rate. Table 3.1 shows the download rate for each Downlink type.

Table 3.1: Download speeds of X-COM Downlink Modules

Downlink Type	Download Speed (TQs/Hour)
Standard Downlink	30
Hypercom Downlink	35
Hyper-Dimensional Downlink	40

As new Downlinks become available, you can replace your existing modules with the newer ones. In order to upgrade to a better Downlink, you have to dismantle one of the existing Downlinks, thus temporarily decreasing your download capability, but the end result is worth the effort.

CANCELING AND CHANGING DOWNLOADS

The Research screen allows you to change and cancel research downloads at will, but this is not a recommended practice in most circumstances. Any time you cancel a download, all the progress you have made on that topic is lost. In other words, if you decide to download that topic at a later date, you have to start at the beginning. The same is true when you replace one research topic with another in mid-download.

There are only two reasons you should ever consider canceling or switching downloads in midstream:

- You are not very far along in the existing topic's download
- A new topic has just become available that is critical to your short-term progress in the game

JAMMED AND DESTROYED DOWNLINKS

Given the chance, the aliens will attempt to slow your progress in research. There are a couple of things that they can do to disrupt or completely halt the transfer of research data to your Downlink Modules.

One method the aliens use is jamming. They often deploy Data Jammer Probes near X-COM bases to disrupt data transmissions between Earth and the base (see Figure 3.2). This has the effect of slowing your research, or even stopping it altogether. As soon as a probe begins jamming a download, the computer informs you of its presence. The display area at the bottom of the Research screen shows exactly which Downlink is being jammed.

> **Tip** **Destroy Data Jammer Probes as soon as possible. Their long-term effect on research can be disastrous.**
>
> TIP-O-MATIC

Figure 3.2

An alien Data Jammer Probe

You don't lose accumulated data from research projects halted as a result of jamming. As soon as the Data Jammer Probe is destroyed, the download continues from the point at which it left off.

The other method the aliens use to disrupt your research is much more devastating. Like all base modules, Downlinks are valid targets for attack. When an alien squadron attacks an X-COM base, one of the aliens' priorities is to destroy important modules—and

> **Tip** **The potential loss of precious research time as a result of destroyed Downlinks makes the protection of these modules one of your top priorities during a base-defense mission.**
>
> TIP-O-MATIC

Downlinks are right near the top of the list. Every Downlink the aliens destroy reduces the speed of the download in progress. Should the aliens destroy *all* of a base's Downlinks, the current download is aborted and all accumulated data on that topic is lost.

GATHERING TOPICS FOR RESEARCH

There are three ways in which new research topics become available: completion of prerequisite research, acquisition of alien artifacts and equipment, and reception of alien intelligence transmissions.

PREREQUISITE RESEARCH

There are certain topics which, after they are downloaded, allow the research of other topics without requiring you to acquire any physical items in the game. Heavy Lasers and Gatling Lasers are two examples of research topics that become available based solely on the research of another technology (in this case, Advanced Lasers). As soon as the prerequisite topic or topics are researched, the new topics appear on the Research screen's available technologies list.

ACQUIRING ALIEN ARTIFACTS AND EQUIPMENT

The majority of research topics in *Interceptor* require you to obtain a piece of alien technology before research can begin. At the end of a successful combat engagement, there is a chance that some of the equipment and weapons carried by the enemy vessels might survive the destruction of the ships themselves. Any items that do survive are returned to your base when your ships leave the combat zone. The items range from beam weapons and missiles to engines and alien corpses.

The probability of any given item surviving the destruction of its host ship varies by item and game difficulty level. Table 3.2 lists all the possible salvage items and their probability of survival at each difficulty level. The game makes a probability roll for every system on every destroyed ship.

Table 3.2: Probability for battlefield salvage by item type and difficulty level

Item	Percentage Chance of Salvage if Difficulty Level Is:				
	Beginner	Experienced	Veteran	Genius	Superhuman
Alien corpse (any)	35	35	35	35	35
Beam weapon (any)	30	25	15	10	7
Cloaking Device	10	8	6	5	3
Dimension Jump Drive	10	5	0	0	0
ECM system (any)	20	15	12	7	3
Engine (any)	10	7	3	1	0

Item	Percentage Chance of Salvage if Difficulty Level Is:				
	Beginner	Experienced	Veteran	Genius	Superhuman
Freighter cargo (any)	45	35	30	25	15
Missile/missile launcher (any except Nova Bomb)	25	15	10	7	5
Sensor/targeting system (any)	25	20	15	10	5
Shield generator (any)	15	12	10	7	5
Ship Damage Control Computer	10	7	3	2	1
Vector Control Thrusters	10	5	0	0	0

There is another way to retrieve alien technology, and that is by capturing alien ships. By capturing an alien vessel you retrieve all equipment and weapons aboard that have not been destroyed in combat. (This includes all cargo inside the hold of a captured freighter!) To capture an alien ship, either disable it and complete the current mission without destroying the disabled ship, or disable the alien vessel, capture it in a Tractor Beam, and hyperspace out of the battle area with the ship in tow (see Figure 3.3).

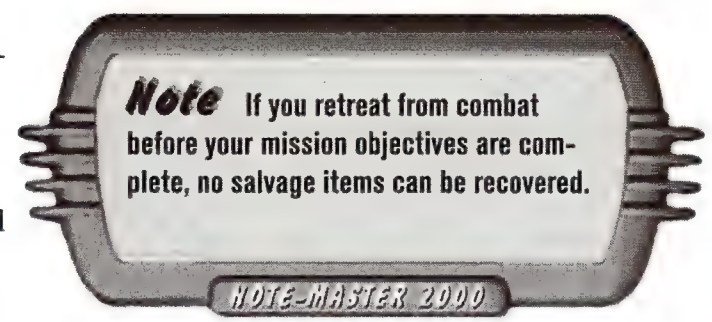


Figure 3.3

An X-COM fighter captures an alien ship.

Not only is the capture of alien ships the only sure way to obtain a load of technology all at once, it is also vital to the completion some kinds of research. As you saw in Table 3.2, you have no chance whatsoever of recovering many alien items as salvage at the higher

difficulty levels. That means that you'll have to capture alien ships in order to obtain them. Additionally, at *all* levels of difficulty, there are certain technologies that only become available for research after the examination of alien fighter craft.

> **Tip** In order to complete the game, you are required to capture and research the first three alien ship types: the Wraith, Spectre, and Phantasm. You are not, however, required to capture and examine the Shade fighter (although it's sure fun to try...).
>
> TIP-O-MATIC

INTERCEPTING ALIEN TRANSMISSIONS

It is by intercepting alien intelligence communiqués that you discover the aliens' plot to build the Doomsday Weapon and destroy the Earth. At intervals throughout the game, both in battle and while on the CSD, you receive fragments of alien transmissions. Like any other research topic, these message fragments are added to your list of available research topics, and must be downloaded before you can examine them.

There are a total of five Alien Messages in the game. The appearance of the first message is strictly governed by time and a probability roll. All ensuing Alien Messages are governed by time, probability, the research of certain prerequisite topics, and other relevant factors. (See "Discovering the Harbingers of Doomsday," later in this chapter.)

There are concrete time thresholds for the possible reception of Alien Messages. They do not appear before the following game dates:

- **Alien Message 1:** February 1, 2067
- **Alien Message 2:** March 1, 2067
- **Alien Message 3:** May 1, 2067
- **Alien Message 4:** July 1, 2067

> **Note** When a transmission is received in combat, one of your wingmen announces it. It is also listed on your debriefing.
>
> NOTE-MASTER 2000

- **Alien Message 5:** October 1, 2067

Assuming that the proper time window has been reached and, in the case of Alien Messages 2 through 5, that all the prerequisites have been met, you have a chance of receiving the next alien transmission each time you enter combat. This chance varies by difficulty level as shown in Table 3.3.

> ***Note*** **Don't despair that the percentage chance of receiving an Alien Message is low. Assuming you've met all the prerequisites, you'll automatically receive the message after a certain period of time. When this happens, you are notified via a message prompt on the CSD.**
>
> NOTE-MASTER 2000

Table 3.3: Chance of receiving an Alien Message during combat

Difficulty Level	Percentage Chance of Receiving Message (Per Mission Flown)
Beginner	7
Experienced	7
Veteran	5
Genius	5
Superhuman	4

DISCOVERING THE HARBINGERS OF DOOMSDAY

The one branch of *Interceptor*'s research tree that doesn't work quite like the others is the one dealing with the five alien message topics and the three Doomsday Pieces (the Alien Structural, Weapon, and Drive Components). These research topics depend not only on the normal discovery/prerequisite model, but on timing and other issues as well. Figure 3.4 shows the portion of the research tree in question.

You'll note that this section of the tree *seems* like any other. The special cases for these technologies arise because they are intricately linked with the actual construction of the aliens' Doomsday Weapon. (See Chapter 6 for details on the aliens' economy and the construction of the Doomsday Weapon.)

The discovery system for this branch goes as follows:

1. Sometime after February 1, 2067, Alien Message 1 will become available for research.
2. As soon as you receive Alien Message 1, the aliens can begin shipping Alien Structural Components aboard freighters from their outposts to the black hole that acts as the entrance to the alien universe. A certain percentage of these

special freighter convoys pass close to X-COM space, and are automatically detected as "hyperwave anomalies." (See Table 3.4 for the specifics.) You are instructed to intercept and destroy these freighter convoys. The aliens ship only a limited number of each component type, so respond quickly to special messages you receive.

3. When you destroy or capture a freighter carrying an Alien Structural Component, this item becomes available for research.
4. After you complete research on the Alien Structural Component, you are eligible to receive Alien Message 2 (subject to time restrictions and other prerequisites).

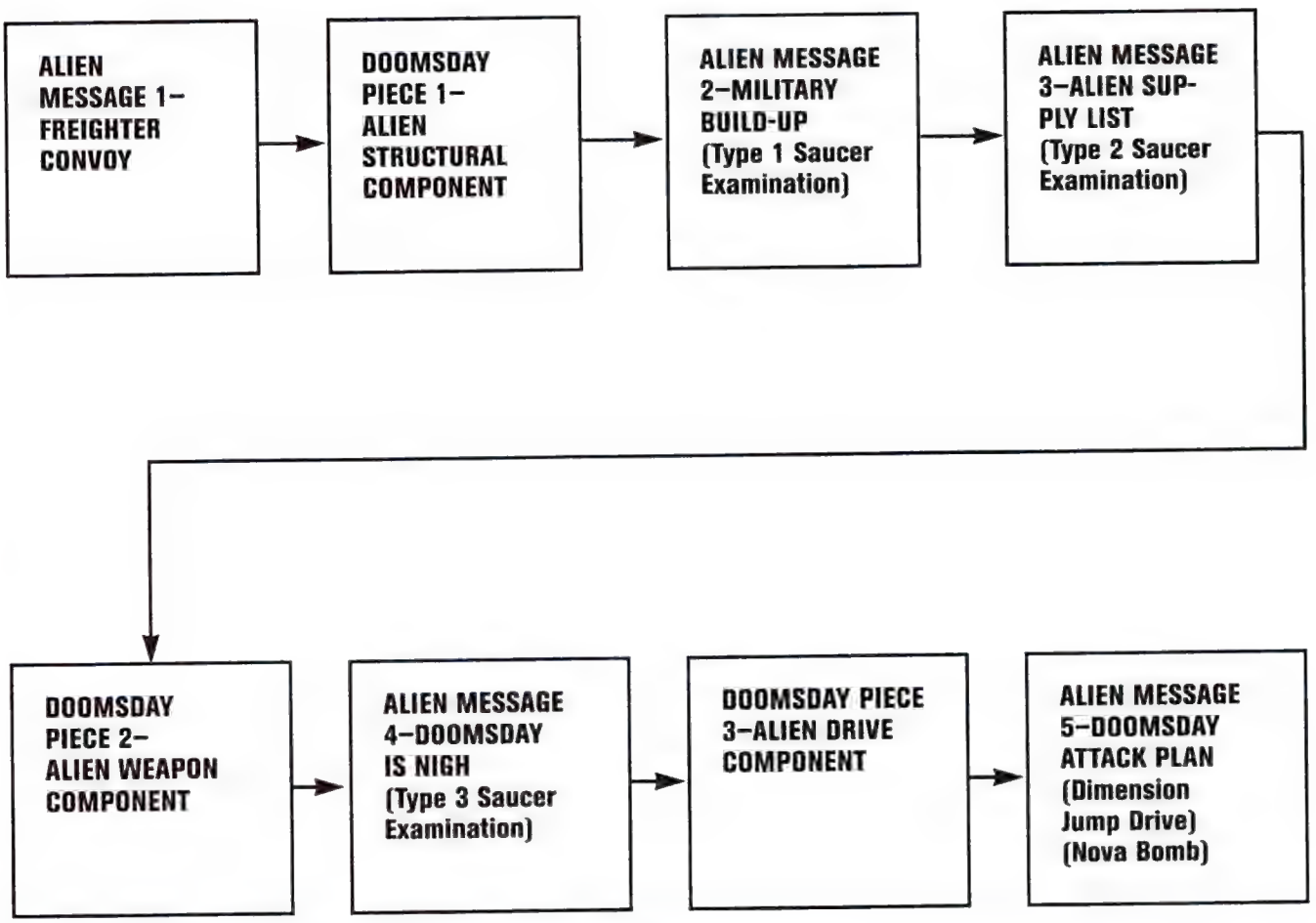
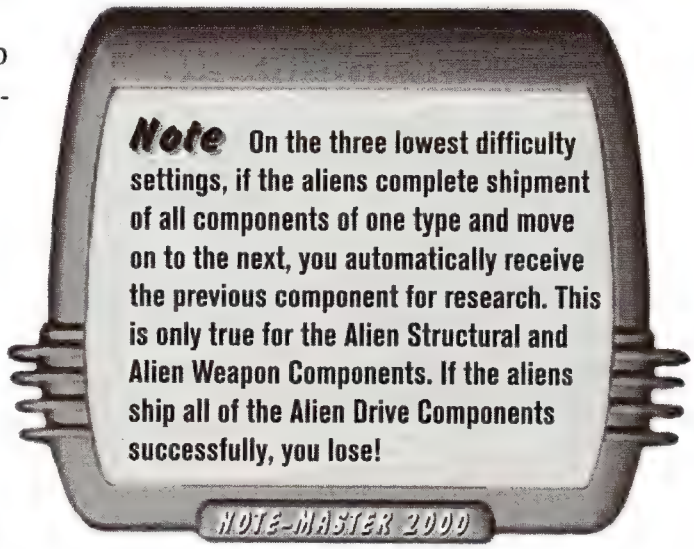


Figure 3.4 ***The Alien Message/Doomsday branch of the research tree***

5. After you research Alien Message 2, you are eligible to receive Alien Message 3 (subject to time and prerequisite restrictions).

6. As soon as you *receive* Alien Message 3 (*not* after you research it) the aliens can start shipping the second Doomsday piece (the Alien Weapon Component). As before, a percentage of the freighters carrying this cargo pass close to X-COM space, and you are notified of their presence.



7. After you destroy a freighter carrying an Alien Weapon Component, you are able to research it. After you complete this research, you are eligible to receive Alien Message 4 (subject to time and prerequisite restrictions).

8. As soon as you *receive* Alien Message 4 (*not* after you research it) the aliens can start shipping the third and final Doomsday piece (the Alien Drive Component). Once again, some of the freighters pass near your territory and you are prompted to go after them.

9. When you obtain the third Doomsday piece (through the normal means), you can research it. After research on the Alien Drive Component is complete, you can receive the final Alien Message.

Table 3.4 shows the percentage of "Doomsday freighters" that pass near X-COM space. For more discussion of the Doomsday freighter missions, see Chapter 9.

Table 3.4: Percentage of Doomsday freighters that pass near X-COM space

Difficulty Level	Percentage of Doomsday Freighters Passing Near X-COM Space
Beginner	65
Experienced	60
Veteran	55
Genius	50
Superhuman	45

THE UFOPEDIA

As is the case with all X-COM games, *Interceptor* includes an online database that enables you to reference information on all the items and technologies in the game (see Figure 3.5). A great many topics and technologies are already contained in this data bank of knowledge

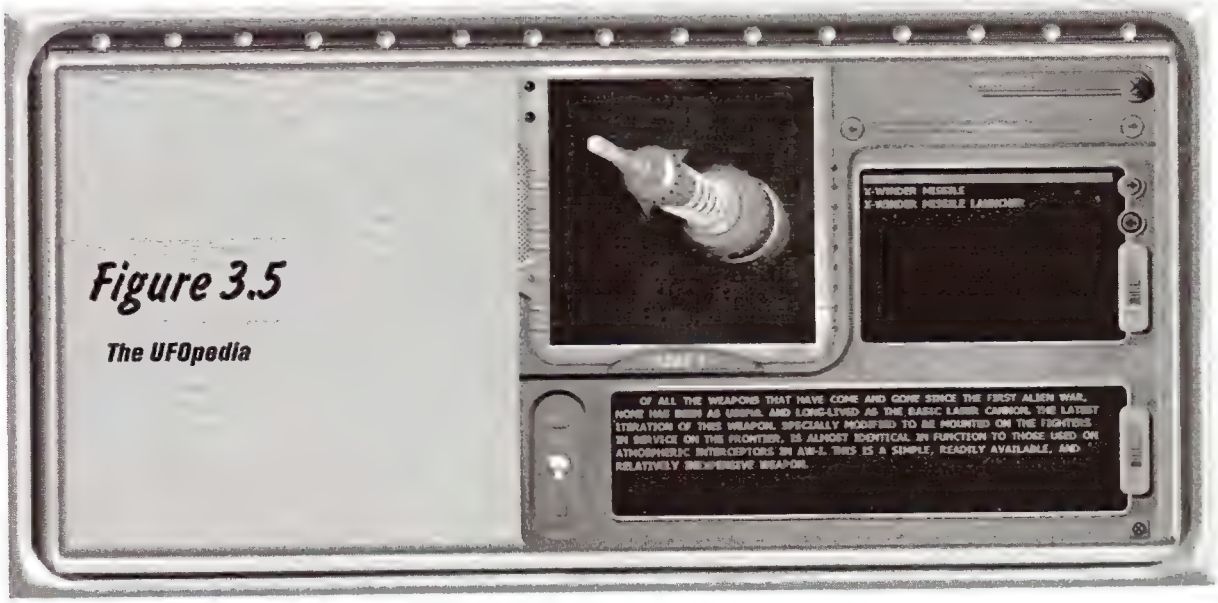


Figure 3.5

The UFOpedia

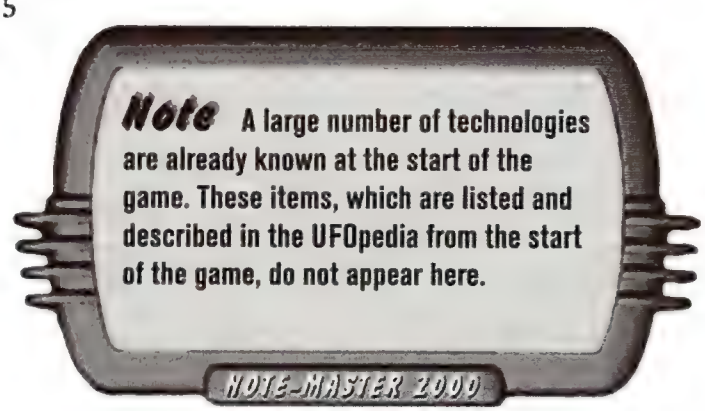
Table 3.5: Research topic statistics

Technology	File Size (TQ)	Prerequisites
Accumulator Shields	25,000	Shade Fighter Examination
Advanced Autonomous Targeting System (AATS)	60,000	Type 3 (Phantasm) Saucer Examination
Advanced Lasers	8,000	–
Aereon	15,000	Capture or destroy a ship with an Aereon pilot
Alien Drone	15,000	Encounter with alien drone
Alien Hull Alloys	45,000	Type 2 (Spectre) Saucer Examination
Alien Message 1	30,000	–
Alien Message 2	40,000	Alien Message 1 Alien Structural Component Type 1 (Wraith) Saucer Examination
Alien Message 3	45,000	Alien Message 2 Type 2 (Spectre) Saucer Examination

at the start of the game. Browse through them at your leisure to become better acquainted with the universe around you. As new research is completed, these items are automatically added to the appropriate UFOpedia categories.

CLIMBING THE RESEARCH TREE

Now it's time to take a good look at all of *Interceptor*'s research topics. The following sections describe each available topic and give you advice on when—and, in some cases, *if*—you should research each one. Table 3.5 lists all the research topics along with their file sizes, prerequisites, and the base modules and equipment that become available after they are researched.



Hardware Yield	Module Yield	Technology Yield
–	–	–
Advanced Autonomous Targeting System (AATS)	AATS Sensors	Tracking Tracer Cannon (w/Tracer Cannon) ECM Type 2 (w/ECM Type 1)
–	–	Heavy Lasers Gatling Lasers
–	–	–
–	–	–
M-3 Super Avenger (Type 3 Interceptor)	–	Trans-Dermal Armor
–	–	Alien Structural Component (w/capture of Alien Structural Component)
–	–	Alien Message 3 (w/Type 2 (Spectre) Saucer Examination)
–	–	Alien Weapon Component (w/capture of Alien Weapon Component)

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Technology	File Size (TQ)	Prerequisites
Alien Message 4	55,000	Alien Message 3 Type 3 (Phantasm) Saucer Examination Alien Weapon Component
Alien Message 5	65,000	Alien Message 4 Alien Drive Component
Beam Mine (Alien)	15,000	Encounter with alien Beam Mine
Cloaking Device	35,000	Trans-Dimensional Fields
Cold Fusion	17,000	Solar Fusion
Data Jammer Probe	15,000	Encounter with Data Jammer Probe
Dimension Jump Drive	65,000	Trans-Dimensional Fields Alien Drive Component
Doomsday Piece 1 (Alien Structural Component)	20,000	Alien Message 1 Capture or destruction of alien freighter towing component
Doomsday Piece 2 (Alien Weapon Component)	35,000	Reception of Alien Message 3 Capture or destruction of alien freighter towing component
Doomsday Piece 3 (Alien Drive Component)	50,000	Reception of Alien Message 4 Capture or destruction of alien freighter towing component
Doppelganger Missile	50,000	Psionic Holography AATS
ECM Type 1	30,000	Emissions Targeting System
ECM Type 2 (Advanced ECM)	40,000	AATS ECM Type 1
Electroplasmic Shields	30,000	Type 1 (Wraith) Saucer Examination
Elerium Torpedo	18,000	Captured Elerium Torpedo
Emissions Targeting System	30,000	Type 2 (Spectre) Saucer Examination
Enveloping Fusion Torpedo	40,000	Captured Enveloping Fusion Torpedo
Ethereal	15,000	Capture or destroy a ship with an Ethereal pilot
Explosive Mine (Alien)	15,000	Encounter with Alien Explosive Mine
Fusion Missile	30,000	Cold Fusion

Hardware Yield	Module Yield	Technology Yield
		Alien Drive Component (w/capture of Alien Drive Component)
–	–	
		Prerequisite to final mission
–	–	
–	–	–
Cloaking Device	–	Passive Cloaking Torpedo (w/AATS)
–	–	Fusion Missile
–	–	–
Dimension Jump Drive	–	–
–	–	Alien Message 2 (w/Type 1 [Wraith] Saucer Examination)
–	–	Alien Message 4 (w/Type 2 [Spectre] Saucer Examination)
–	–	Nova Bomb (w/Enveloping Fusion Torpedo, Synthetic Elerium, and Fusion Missile)
Doppelganger Missile Doppelganger Missile Launcher	–	–
ECM Pod Type 1	ECM Module	ECM Type 2 (w/AATS)
ECM Pod Type 2	Advanced ECM Module	–
Electroplasmic Shield	Electroplasmic Shield Generator	Permeator Missile (w/Emissions Targeting System)
Elerium Torpedo Elerium Torpedo Launcher	Elerium Torpedo Missile Defense Module	–
Emissions Targeting System	Emissions Tracking Sensors	Permeator Missile (w/Electroplasmic Shields) Sidestep Missile (w/Vector Control Thrusters) ECM Type 1 Missile Minefield (w/Explosive Minefield)
Enveloping Fusion Torpedo Enveloping Fusion Torpedo Launcher	Enveloping Fusion Torpedo Missile Defense Module	Nova Bomb (w/Synthetic Elerium, Fusion Missile, and Alien Drive Component)
–	–	–
–	–	–
Fusion Missile Fusion Missile Launcher	Fusion Missile Defense Module	Nova Bomb (w/Synthetic Elerium, Enveloping Fusion Torpedo, and Alien Drive Component)

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Technology	File Size (TQ)	Prerequisites
Gatling Lasers	10,000	Advanced Lasers
Graviton Pulse Drive	60,000	Type 2 (Spectre) Saucer Examination
Gravity Induction Drive	35,000	Type 1 (Wraith) Saucer Examination
Harbinger Alien Tug	20,000	Encounter with Harbinger Tug
Heavy Lasers	12,000	Advanced Lasers
Hunter Probe	25,000	Vector Control Thrusters
Hyper-Dimensional Data Transfer	30,000	Type 1 (Wraith) Saucer Examination
Microbit Compression	50,000	Type 2 (Spectre) Saucer Examination
Missile Mine (Alien)	15,000	Encounter with alien Missile Mine
Muton	15,000	Capture or destroy a ship with a Muton pilot
Nova Bomb	70,000	Synthetic Elerium Fusion Missile AATS Enveloping Fusion Torpedo Doomsday Piece 3 (Alien Drive Component)
Parallax Torpedo	30,000	Captured Parallax Torpedo
Passive Cloaking Torpedo	40,000	AATS Cloaking Device
Permeator Missile	27,000	Electroplasmic Shields Emissions Targeting System
Phase Cannon	40,000	Captured Phase Cannon
Plasma Pulse Cannon	20,000	Captured Plasma Pulse Cannon
Psi Blaster	55,000	Captured Psi Blaster
Psilord	15,000	Capture or destroy a ship with a Psilord pilot
Psionic Amplification	35,000	Psi Blaster
Psionic Holography	35,000	Psionic Projection Psionic Amplification
Psionic Projection	45,000	Parallax Torpedo
Sectoid	15,000	Capture or destroy a ship with a Sectoid pilot
Sensor Probe (Alien)	15,000	Destruction of alien Sensor Probe
Shade Fighter Examination	75,000	Captured Shade fighter
Ship Damage Control Computer	30,000	Type 2 (Spectre) Saucer Examination
Sidestep Missile	25,000	Vector Control Thrusters Emissions Targeting System

Hardware Yield	Module Yield	Technology Yield
Gatling Laser	Gatling Laser Beam Defense Module	Tachyon Pulser (w/Plasma Pulse Cannon)
Graviton Pulse Drive	–	–
Gravity Induction Drive	–	–
–	–	–
Heavy Laser	Heavy Laser Beam Defense Module	Tracer Cannon (w/Emissions Targeting System)
Hunter Probe	–	–
–	Hypercom Downlink	–
–	Hyper-Dimensional Downlink	–
–	–	–
–	–	–
Nova Bomb Nova Bomb Launcher	–	Prerequisite to final mission
Parallax Torpedo Parallax Torpedo Launcher	Parallax Torpedo Missile Defense Module	Psionic Projection
Passive Cloaking Torpedo Passive Cloaking Torpedo Launcher	–	–
Permeator Missile Permeator Missile Launcher	Permeator Missile Defense Module	–
Phase Cannon	Phase Cannon Beam Defense Module	–
Plasma Pulse Cannon	Plasma Pulse Cannon Beam Defense Module	Tachyon Pulser (w/Gatling Lasers)
Psi Blaster	–	Psionic Amplification Trans-Dimensional Shields (w/Trans-Dimensional Fields)
–	–	–
–	–	Psionic Holography (w/Psionic Projection)
–	–	Doppelganger Missile (w/AATS)
–	–	Psionic Holography (w/Psionic Amplification)
–	–	–
–	–	–
–	–	Accumulator Shields
Ship Damage Control Computer	Damage Control Module	–
Sidestep Missile Sidestep Missile Launcher	Sidestep Missile Defense Module	–

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Technology	File Size (TQ)	Prerequisites
Solar Fusion	15,000	–
Synthetic Elerium	20,000	–
Tachyon Pulser	25,000	Gatling Lasers Plasma Pulse Cannon
Tracer Cannon	45,000	Heavy Lasers Emissions Targeting System
Tracking Tracer Cannon	55,000	Tracer Cannon AATS
Tractor Beam	30,000	–
Trans-Dermal Armor (Armor Type 3)	55,000	Alien Hull Alloys
Trans-Dimensional Fields	45,000	Type 3 (Phantasm) Saucer Examination
Trans-Dimensional Shields	55,000	Trans-Dimensional Fields Psi Blaster
Tri-Titanium Armor	35,000	Tri-Titanium Construction
Tri-Titanium Construction	30,000	Type 1 (Wraith) Saucer Examination
Type 1 (Wraith) Saucer Examination	35,000	Captured Type 1 (Wraith) Saucer
Type 2 (Spectre) Saucer Examination	50,000	Captured Type 2 (Spectre) Saucer
Type 3 (Phantasm) Saucer Examination	65,000	Captured Type 3 (Phantasm) Saucer
Vector Control Thrusters	30,000	Type 1 (Wraith) Saucer Examination

Hardware Yield	Module Yield	Technology Yield
–	–	Cold Fusion
–	–	Nova Bomb (w/AATS, Fusion Missile, Enveloping Fusion Torpedo, and Alien Drive Component)
Tachyon Pulser	Tachyon Pulser Beam Defense Module	–
Tracer Cannon	Tracer Cannon Beam Defense Module	Tracking Tracer Cannon (w/AATS)
Tracking Tracer Cannon	Tracking Tracer Cannon Beam Defense Module	–
Tractor Beam	Tractor Module	–
Trans-Dermal Armor	–	–
–	–	Cloaking Device Dimension Jump Drive (w/Alien Drive Component) Trans-Dimensional Shields (w/Psi Blaster)
Trans-Dimensional Shields	Trans-Dimensional Shield Generator	–
Tri-Titanium Armor	–	–
S-2 Firestar Interceptor	–	Tri-Titanium Armor
–	–	Vector Control Thrusters Gravity Induction Drive Tri-Titanium Construction Hyper-Dimensional Data Transfer Electroplasmic Shields Alien Message 2 (w/Doomsday Piece 2–Alien Structural Component)
–	–	Emissions Targeting System Graviton Pulse Drive Microbit Compression Alien Hull Alloys Alien Message 3 (w/Alien Message 2)
–	–	AATS Trans-Dimensional Fields Alien Message 4 (w/Doomsday Piece 2–Alien Weapon Component)
Vector Control Thrusters	–	Sidestep Missile (w/Emissions Targeting System) Hunter Probe

The point of the following sections is to give you research guidance and advice—*not* to give you a detailed X-COM universe explanation of each research topic. If you want colorful descriptions, try the UFOpedia in the game. If you want to learn how to proceed in your research, read on.

Sometimes you may find it helpful to see an illustration of the interrelationship between research topics. Figure 3.6 shows the various sections of *Interceptor*'s research tree.

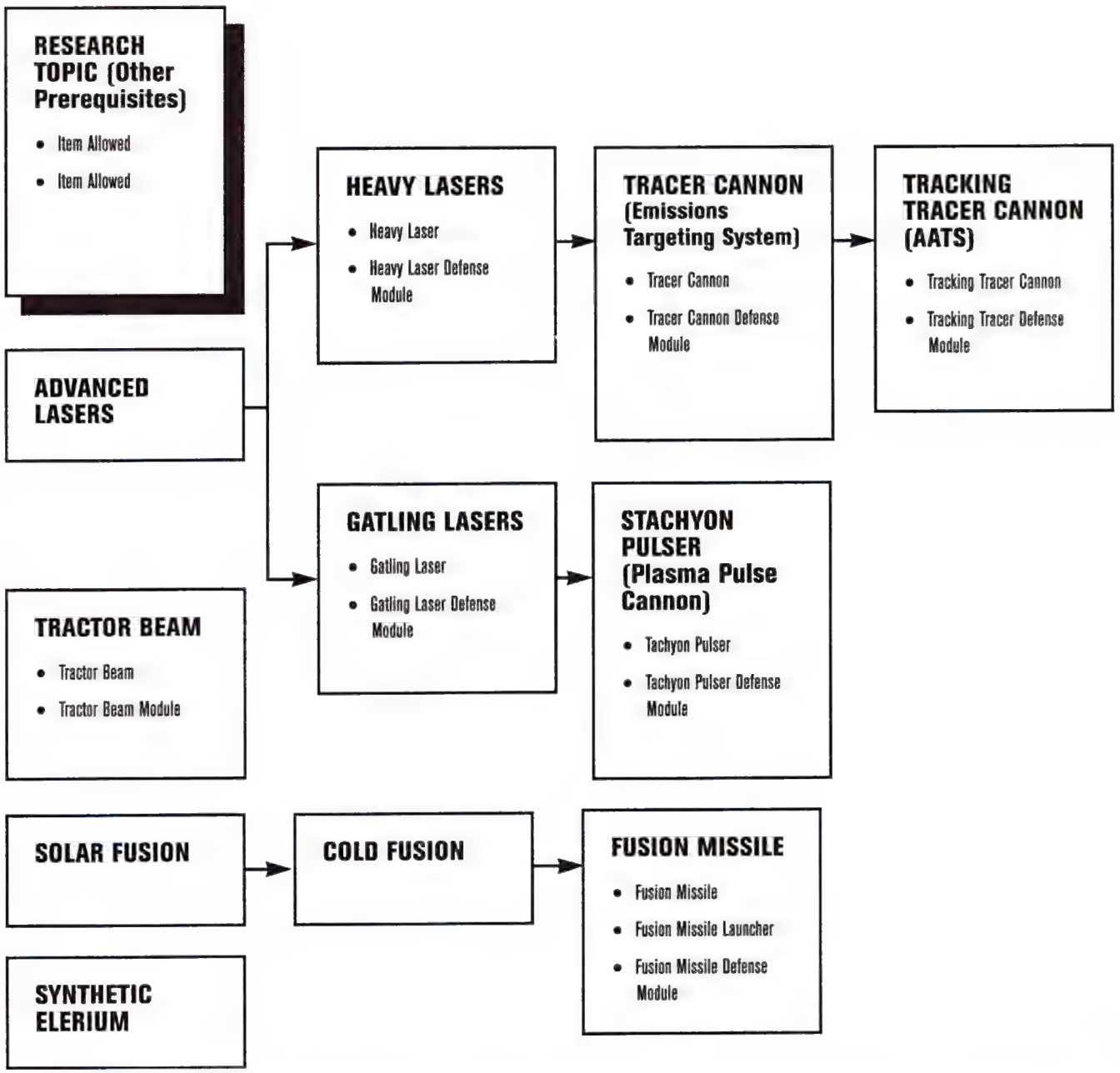


Figure 3.6 **The research tree**

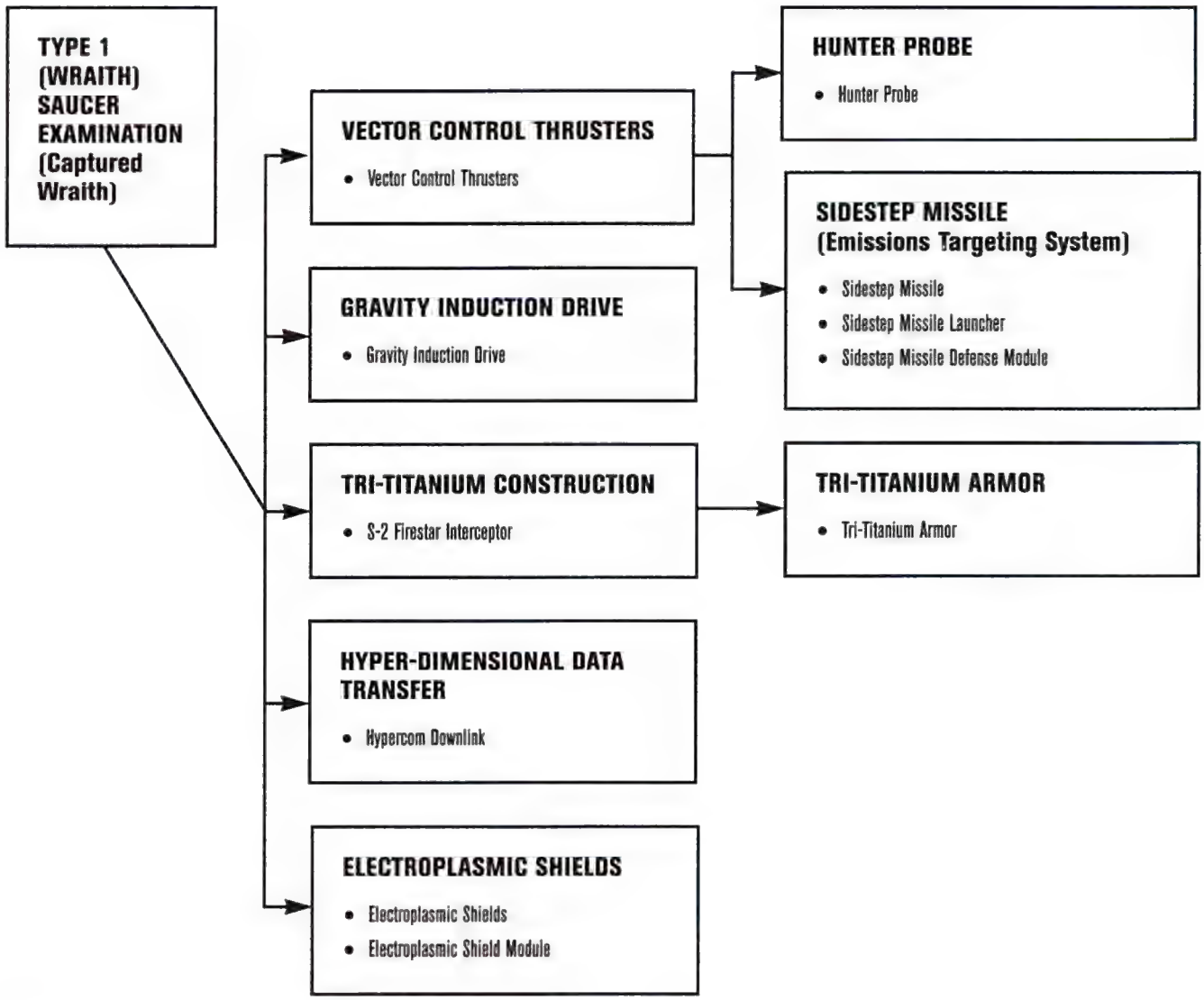


Figure 3.7 ***The research tree (continued)***

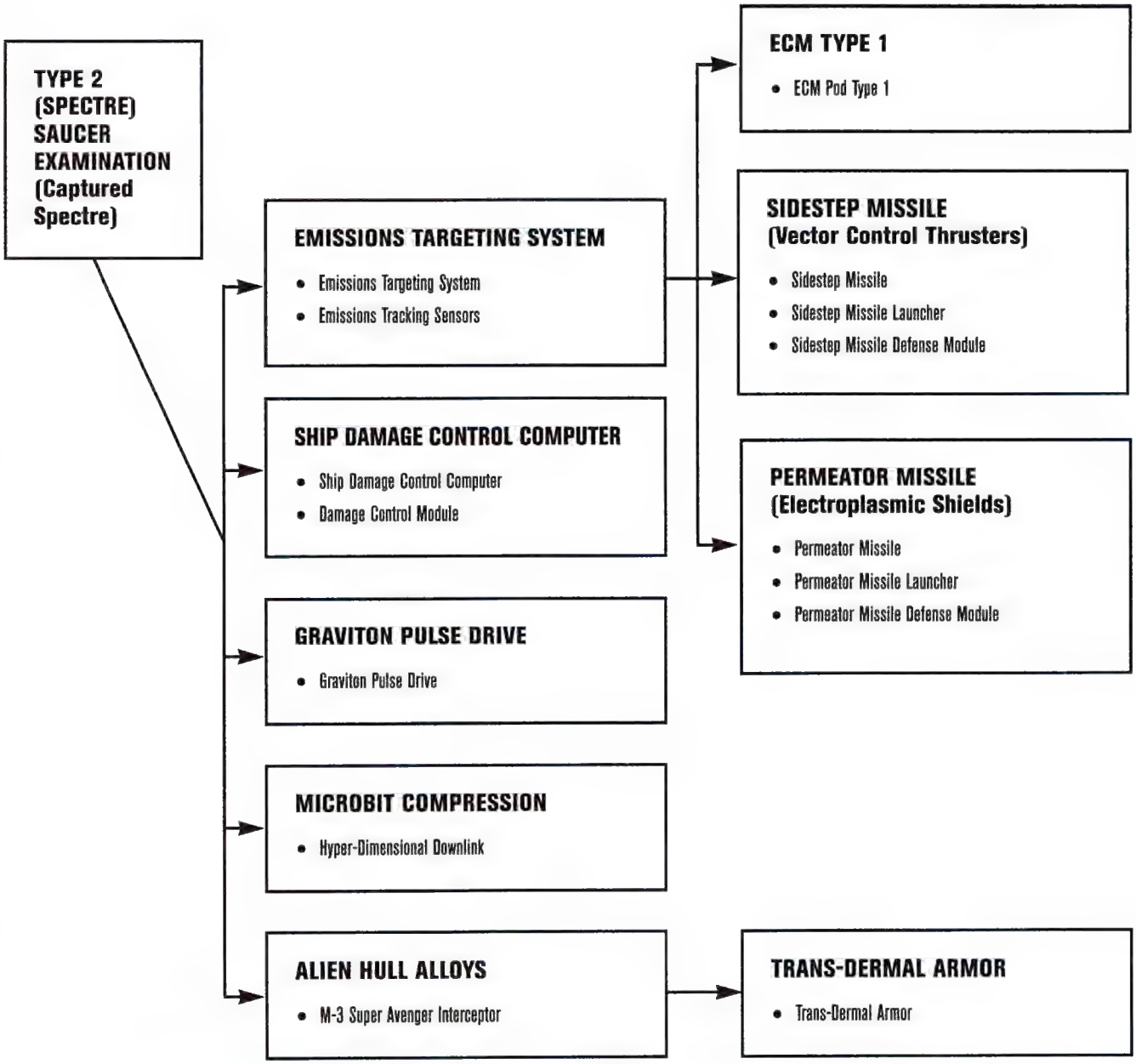


Figure 3.8 ***The research tree (continued)***

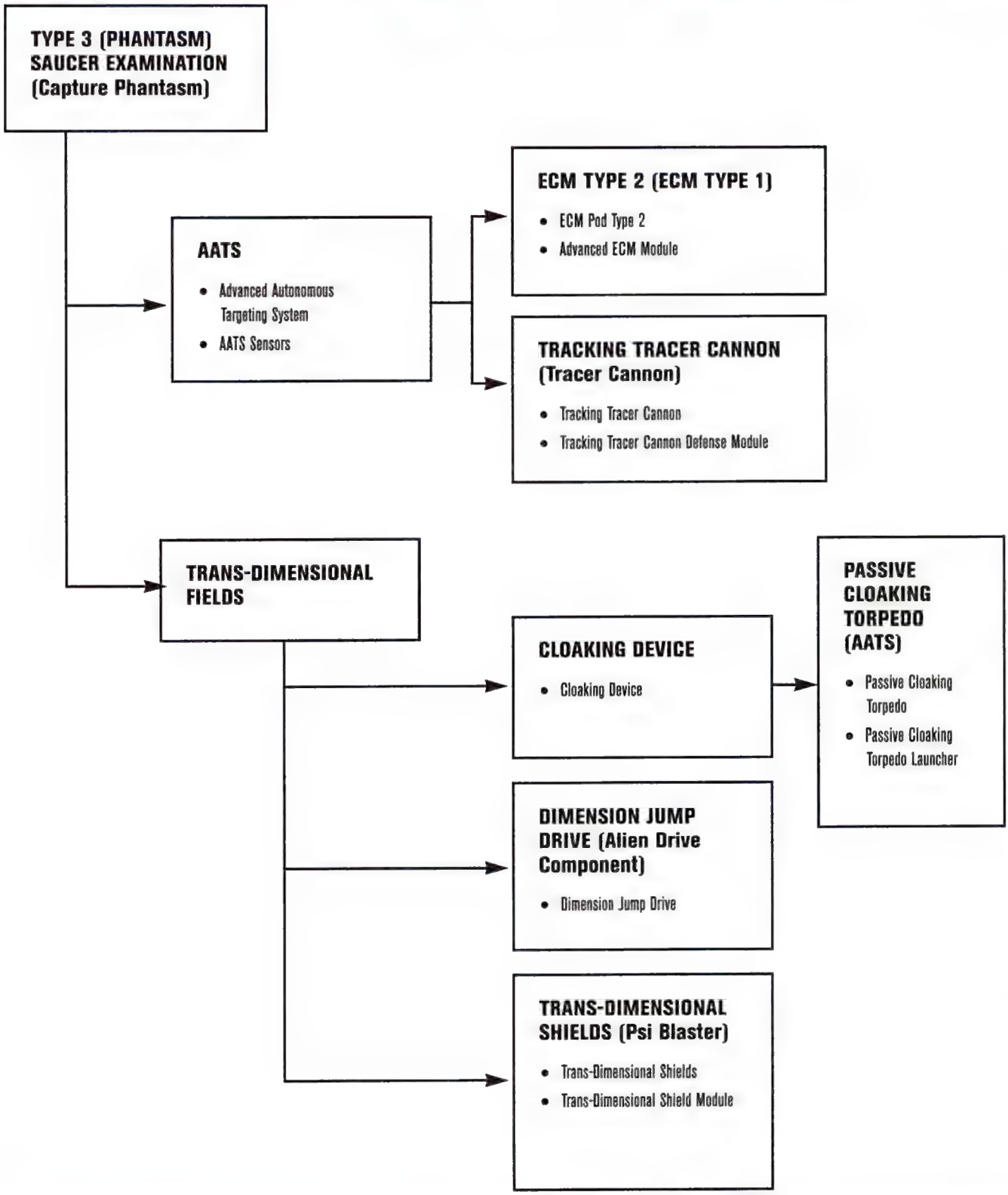


Figure 3.9 *The research tree (continued)*

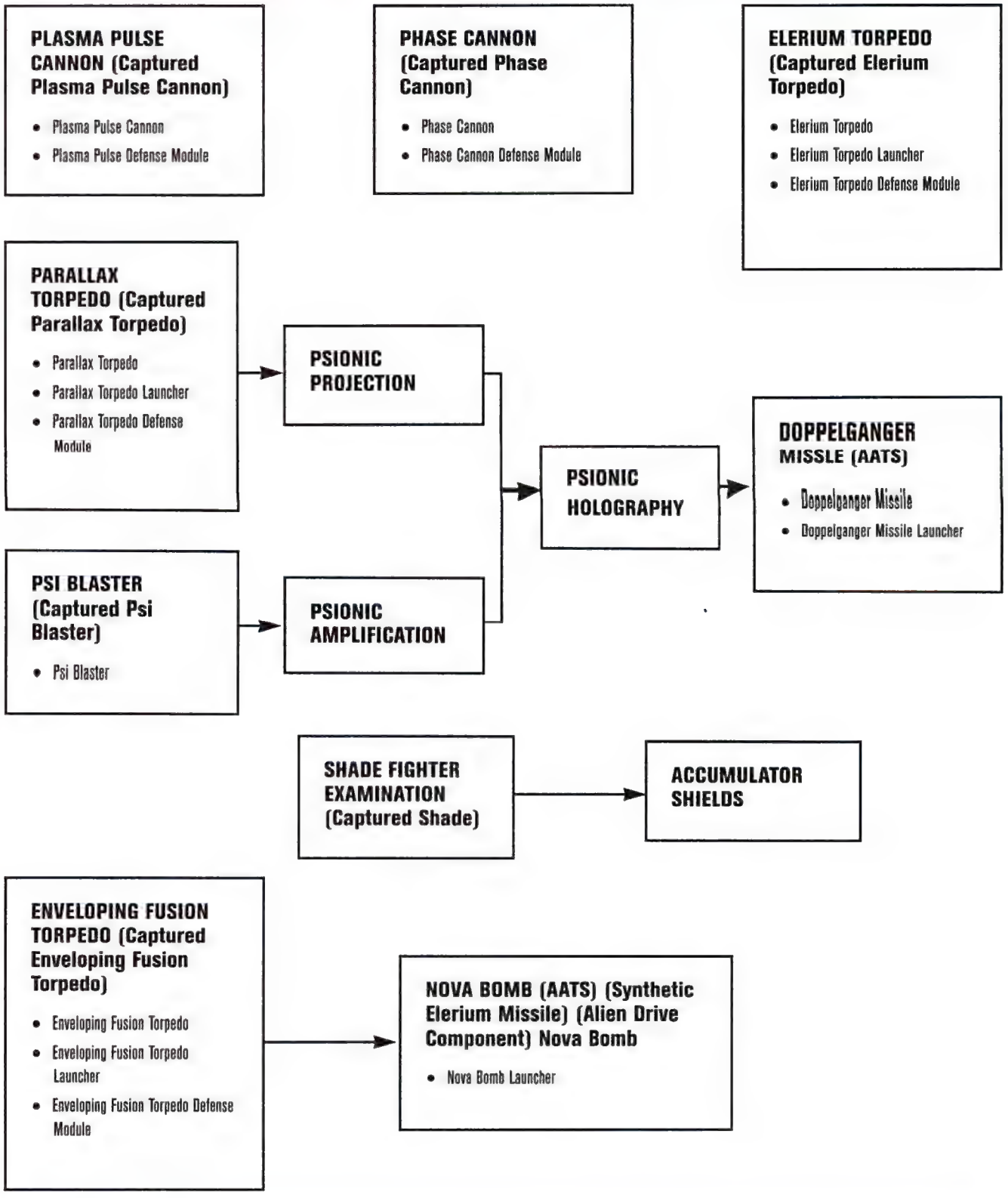


Figure 3.10 *The research tree (continued)*

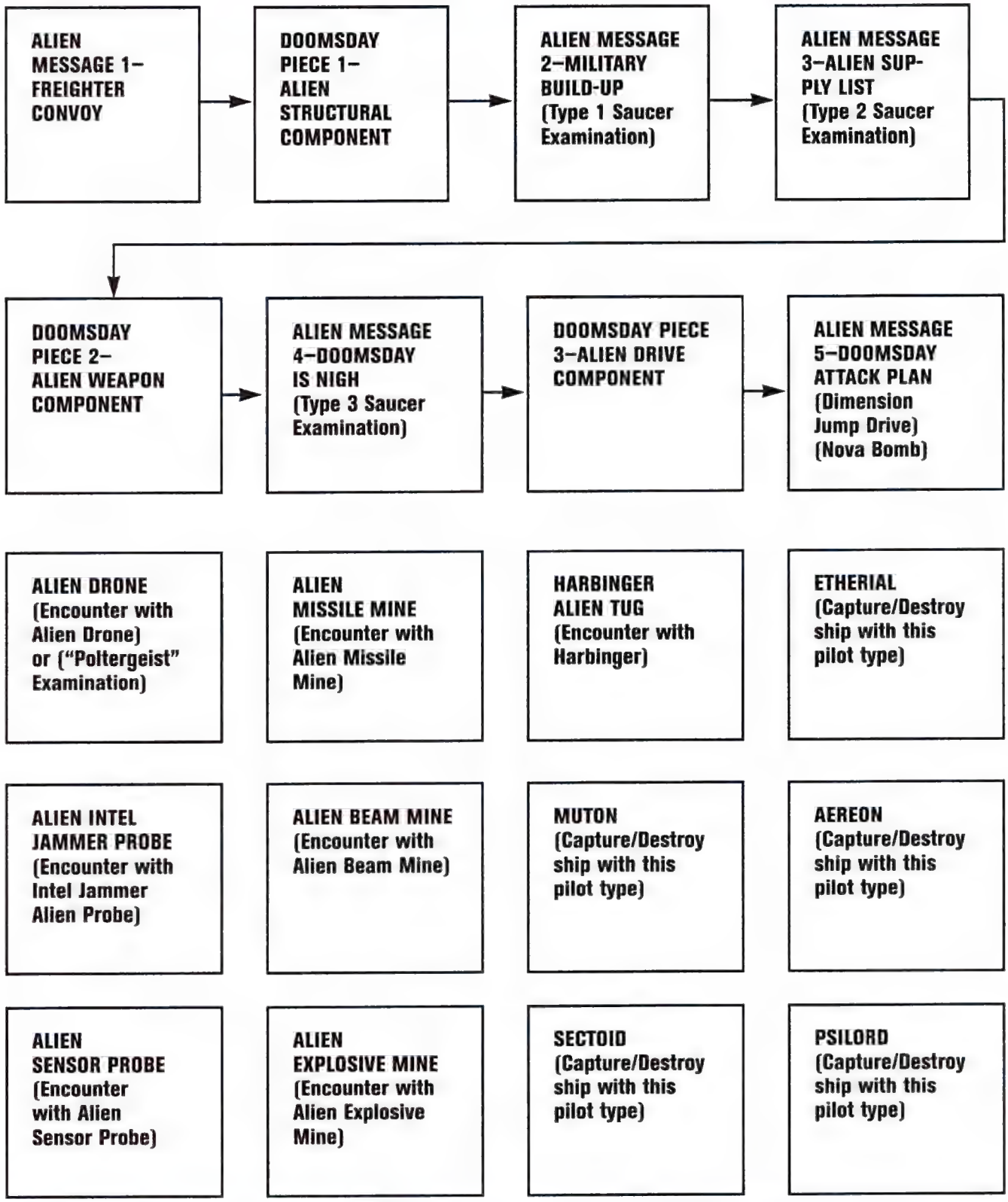


Figure 3.11 *The research tree (continued)*

VITAL RESEARCH TOPICS

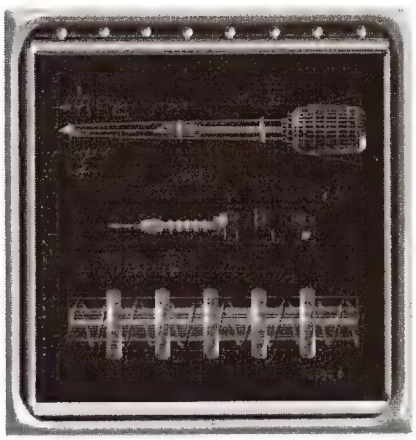
The topics in this section are the ones you *must* complete in order to make it through the research tree. Until you have completed research on all of them you cannot finish the game.

ADVANCED AUTONOMOUS TARGETING SYSTEM

This is the best targeting system available in the game, with the shortest missile-lock time and the ability to target any weapons system in the game. (See Chapter 5 for details on targeting systems.)

No question about it, the AATS is a very important technology. If the only advantage to having this targeting system available were the short missile-lock time, it would be well worth pursuing—but there's an even better reason. The AATS is required to fire the Nova Bomb, and you can't win the game without the Nova Bomb. As soon as it becomes available, set your research sights on this technology.

ADVANCED LASERS



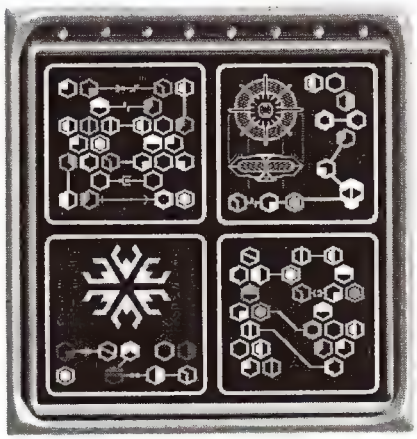
This is one of a number of "pure technology" topics in the game. Upon completion of this topic, you don't gain the ability to build any new equipment or base modules. The only result is the availability of additional research topics. In most cases, however, the additional research topics are vital to the completion of the game.

Completing Advanced Lasers allows the research of both Gatling and Heavy Lasers. Both of these weapons are far more effective than the standard Laser Cannons you have at the start of the game. It behooves you to move as quickly as possible down this path so that you can improve your weapons before alien attacks become too frequent.

Tip **Advanced Lasers should be your first research goal in the game, bar none. No question about it.**

TIP-O-MATIC

ALIEN HULL ALLOYS



One of the reasons the aliens' ships can take more of a punch in battle than yours is that their ships are built better.

Alien Hull Alloys is a vital technology that becomes available after the examination of a Spectre saucer. There's no getting around this one—the study of this technology is what allows you to build Super Avenger interceptors and research Trans-Dermal Armor. There is no reason to cancel current research in order to pursue this topic unless your immediate goal is an all-out offensive against alien facilities; but neither should you wait too long before you head down this path.

ALIEN MESSAGE 1 (ALIEN FREIGHTER CONVOY)

This is the first of the five Alien Messages that advance the plot and fill in the details about the aliens' plan to build a Doomsday Weapon and destroy the Earth. This particular message shows a group of alien freighters diving one by one into a black hole.

Alien Messages are not research topics you want to sit on for a long period of time. Since they are absolutely vital to the completion of the game, you should research them as soon as possible after you receive them.

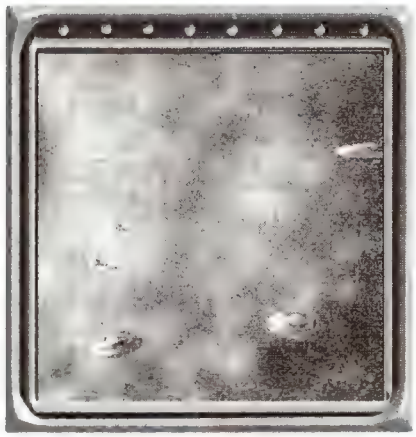
ALIEN MESSAGE 2 (ALIEN MILITARY BUILD-UP)

Same black hole, different day...

In this, the second of five Alien Messages, you observe a build-up of alien forces near what you assume to be the same black hole seen in Alien Message 1. What's going on here? (This is a rhetorical question if you've already read Chapter 1 of this guide.)

Warning **The section of the research tree that deals with the Alien Messages and the Doomsday Pieces works a little differently than the rest of the research system. See "Discovering the Harbingers of Doomsday," earlier in this chapter, for details.**

WARN-TRON



Once again, there is no point in putting off the inevitable. Dedicate some of your research time to deciphering Alien Message 2 as soon as you can spare the time from your weapons research.

ALIEN MESSAGE 3 (ALIEN SUPPLY LIST)

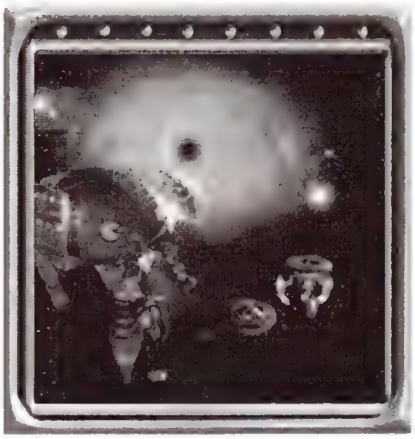
Interesting. Seems this time you've tapped into some hidden alien surveillance camera and caught them in the act of making a supply list. Some of the items are familiar—weapons you've probably already seen in the game. There are a few snippets of your native tongue amidst the alien words this time, and from what you're hearing—especially that bit about a "Doomsday project"—the outlook is somewhat grim.

As always, make research room for Alien Message 3 as soon as your Downlink resources are freed up from their current task.

ALIEN MESSAGE 4 (DOOMSDAY IS NIGH)

The title of this message is, perhaps, something of a leap as far as the GSC scientists back on Earth are concerned—but that doesn't make it any less true. When you get this message, the aliens are nearing the completion of their weapon and you're starting to run out of time.

This far into the game, it's not a good idea to procrastinate in your research. You might want to consider giving this topic top priority when it becomes available.

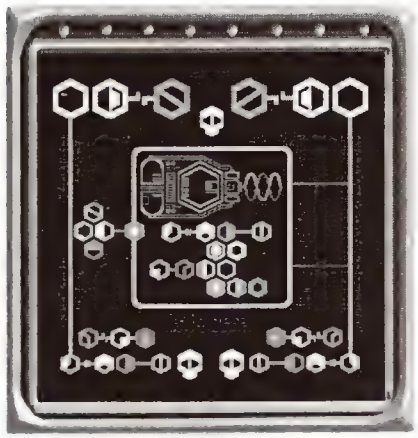


ALIEN MESSAGE 5 (THE DOOMSDAY ATTACK PLAN)

This is the last alien message you receive. It contains a detailed description of the aliens' plan to destroy Earth. It also provides you with a map showing the general location of the black hole that acts as the entrance to the aliens' universe. This is one of the topics where you really *must* read the text in the UFOpedia—otherwise, you won't know how to stop the massive alien weapon.

The reception of this message means that the end of the game is looming. The aliens are almost ready to launch the Doomsday Weapon, and you still haven't found out where they are! This is *the* pivotal research topic of the game, and you should pursue it as quickly as possible as soon as it becomes available.

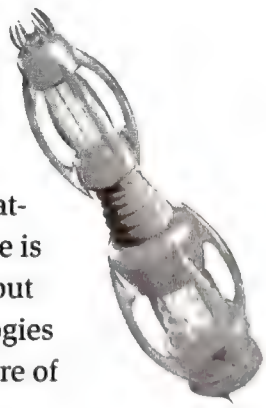
COLD FUSION



Cold fusion is a technology that has been investigated for decades without any success. Thanks to the folks at the GSC, however, it has finally become a reality and X-COM can reap the benefits of this cutting-edge and potentially deadly technology.

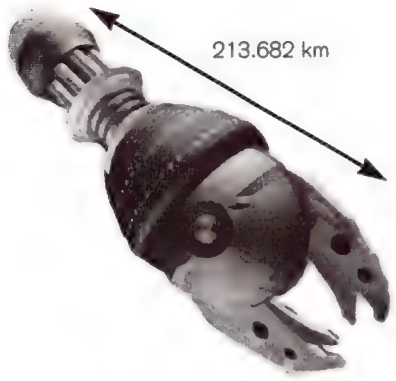
Cold Fusion is one of the early links in the research chain that (eventually) leads to the Nova Bomb. Obviously, that makes it very important in the long run, but how about the short term? Well, Cold Fusion is also the technology that allows you to build the powerful Fusion Missile, which is indispensable when you attempt to attack anything larger than an alien outpost. If your goal is to go on the offensive, you'll want to pursue Cold Fusion sooner rather than later.

DIMENSION JUMP DRIVE



Just how *do* the aliens fly through a black hole? That's the question the research into this device answers.

This is one of those items that you're fairly unlikely to find just floating around in space after a battle. The fact that a Dimension Jump Drive is fairly hard to come by bumps it up a little on the research priority list, but the real impetus to research this item is that it's one of the key technologies that allows you to launch the final attack on the alien universe. Take care of this one as soon as you possibly can.



DOOMSDAY PIECE 1 (ALIEN STRUCTURAL COMPONENT)

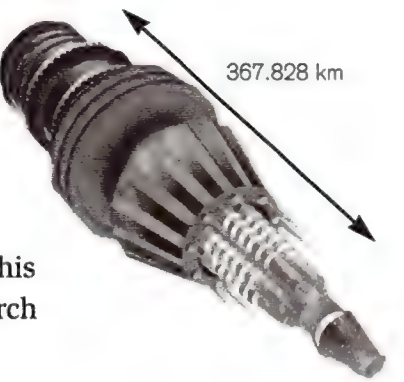
This is one of three actual components of the Doomsday Weapon that you must capture in order to divine the aliens' plans. These components are carried aboard alien freighters (broken down into pieces, no doubt, judging by their size), and are found as a result of the destruction or capture of the host freighter.

Note Once again, the Doomsday Pieces section of the research tree works differently than the rest of the research system. See "Discovering the Harbingers of Doomsday," earlier in this chapter, for details.

NOTE-MASTER 2000

Doomsday components are the prerequisites required to move up the Alien Message branch of the research tree. After you research Alien Message 1, you need to go on the offensive immediately and seek out alien freighter convoys. (If you don't find them right away, don't worry—they'll eventually wander your way on their own. Don't ignore them when they do!) Until you are able to find and research an Alien Structural Component, your research in the alien transmission category cannot continue.

DOOMSDAY PIECE 2 (ALIEN WEAPON COMPONENT)



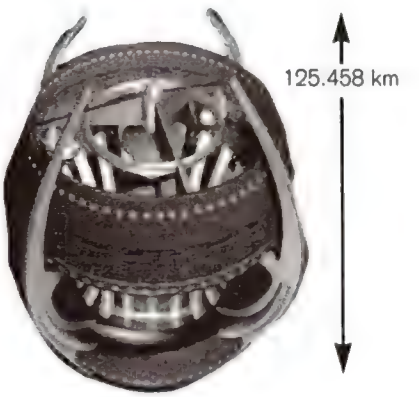
The second of the Doomsday Pieces, the Weapon Components, start shipping aboard alien freighters soon after you research Alien Message 3. After Message 3 is in the bag, it's time to go on another freighter hunt and track down this component. You can't receive Alien Message 4 until you research an Alien Weapon Component.

DOOMSDAY PIECE 3 (ALIEN DRIVE COMPONENT)

This is the final Doomsday component. Alien freighters begin ferrying Drive Components soon after you receive Alien Message 4. As with the other two components, it is up to you to track down and capture or destroy a freighter convoy that is hauling this item. Until you research an Alien Drive Component, you cannot receive the fifth—and final—Alien Message.

Tip Doomsday components are actually used by the aliens in the game to build the Doomsday Weapon. A certain number of each is required for the weapon's completion. By destroying and capturing the alien freighter convoys carrying these components, you are directly impeding the aliens' progress. (See Chapter 6 for specific details.)

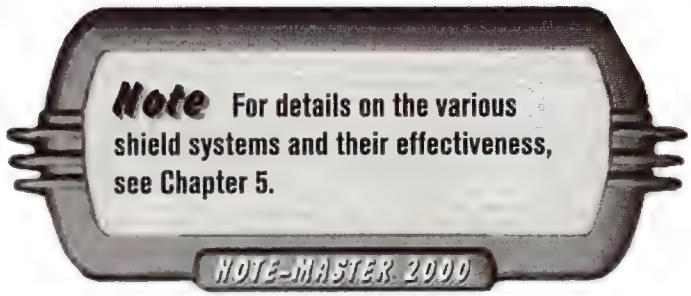
TIP-O-MATIC



ELECTROPLASMIC SHIELDS

From the very start, the aliens have an edge over you in all battle-related technologies. Shielding is no exception, as you'll see as soon as you discover what they've been using against you!

Electroplasmic Shields are the first of three alien shielding types you can discover, and one of the two of that you can actually *use*. As soon as you capture a Wraith saucer, you have the opportunity to study this technology, and you should do so with as little delay as possible. One of your first priorities in the game—after discovering some more effective beam weapons, that is—should be upgrading your shields. Look no farther. This is the topic you need to do just that.



EMISSIONS TARGETING SYSTEM

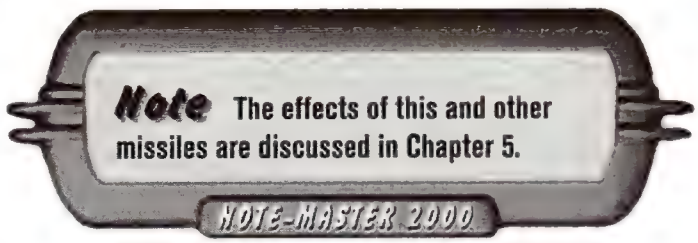
Isn't it tough waiting all that time for your missiles to lock on target? If you're like most pilots, your thumb gets itchy after a couple of seconds, and you just can't wait to let the missiles fly.

If this describes you, the Emissions Targeting System is the answer to your prayers. The targeting system you can build after you complete this research topic has a shorter missile-lock time and a longer effective range than the standard system you're stuck with at the start of the game. Even if this technology *weren't* a vital link in the development of several of the more advanced missile weapons, the Emissions Targeting System would be worth pursuing as soon as possible.

ENVELOPING FUSION TORPEDO

The fusion-related technology branch is one of the most vital in the game—it's the one that eventually leads to the discovery of the Nova Bomb. The Enveloping Fusion Torpedo is one of the two powerful missiles you discover on the way to that ultimate goal.

As you can probably guess, everything along this particular research path can be considered a high priority. There is some added impetus for research when it comes to this weapon, however, since it's just so darned useful and effective. This is one of those technologies you don't want to leave waiting for long.



FUSION MISSILE

Fusion Missiles are known as "base busters"—and not without good reason. These babies are just the ticket for wiping out large alien installations. (See Chapter 5 for the destructive details.)

This is one of the two reasons to pursue the fusion branch of the research tree. (The other is the Nova Bomb.) If you haven't started down this path by the end of April, you should probably put everything else aside—with the exception of Alien Messages and Doomsday Pieces, that is—and get cracking. By about midway through the game, you should be thinking about going on the offensive, tracking down some alien outposts and mining platforms. You can do that with less-powerful missiles at your disposal, but the Fusion Missile is strongly recommended if you want to get the job done right.

GATLING LASERS

Upgraded from the standard Laser Cannons you started out with, Gatling Lasers tremendously increase the amount of damage you and your wingmen can inflict. Once you upgrade your interceptors to this weapon, you'll wonder how you ever lived without it. (See Chapter 5 for details.)

As stated earlier, Advanced Lasers is the first topic you should research in the game. The main reason for this is that it enables you to research better beam weapons. Although Heavy Lasers are useful and pack quite a wallop, Gatling Lasers definitely have an edge due to their rapid rate of fire. Do yourself a favor and make Gatling Lasers your second research project. You'll be glad you did.

GRAVITON PULSE DRIVE

The Graviton Pulse Drive is the third and final main drive system for X-COM craft. It usually becomes available about halfway through the game, around the same time you start building Super Avenger interceptors. It's a good thing, too, since the mass of the Super Avenger tends to bog down the earlier, less-powerful drive systems. In addition, the Graviton Pulse Drive allows ships to travel in hyperspace for continuous periods of up to 48 hours. This is an important factor late in the game when you are launching attacks on distant alien installations.

Researching the Type 2 (Spectre) saucer enables you to research a number of new technologies. The most important of these is the Emissions Targeting System, and you should pursue that topic first. The Graviton Pulse Drive is a close second, however. There is no point in pursuing Alien Hull Alloys until you have the ability to build engines powerful enough to drive the Super Avenger interceptor that becomes available as a result.

For more info on drive systems, see Chapter 5.

GRAVITY/INDUCTION DRIVE

This is the middle-of-the-pack interceptor engine, and becomes available for research after you capture and examine the alien Type 1 (Wraith) saucer.

Of the topics that become available after you research the Wraith, Gravity/Induction Drive is exceeded in importance only by Tri-Titanium Construction (which allows the construction of the Firestar interceptor and the research of Tri-Titanium Armor). You'll definitely want to research this before you start building too many Firestars, however, since the heavier hull of the mid-sized interceptor requires a more powerful engine to perform at its best. Also, the additional hyperspace endurance is always a welcome addition to your fleet's capabilities.

NOVA BOMB

Note See Chapter 5 for details on Nova Bomb operation and capabilities.

NOTE-MASTER 2000

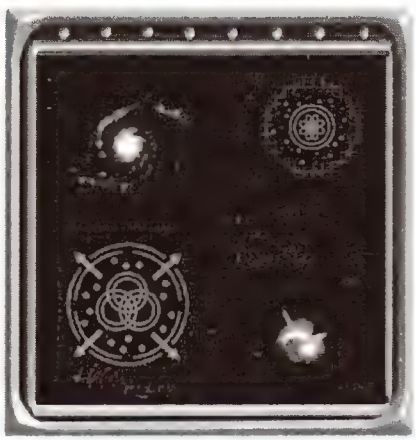
This is the most destructive weapon in the game. Period.

If that's not enough to recommend the Nova Bomb as a desirable topic of research, try this: you can't win the game without it. This is the only thing that can destroy the Doomsday Weapon—you can't even launch the final mission unless you have at least one Super Avenger equipped with this weapon in your attacking fleet. Research it ASAP. Why delay the inevitable?

Tip Another reason to research the Nova Bomb as soon as possible is its destructive potential outside the alien universe. If you can successfully deliver this baby into the star of an alien outpost system, it's bye-bye outpost and bye-bye mining platforms (and planets, and asteroids, and star...). There's no better way to cause mass economic chaos in the alien infrastructure in so short a time.

TIP-O-MATIC

SOLAR FUSION

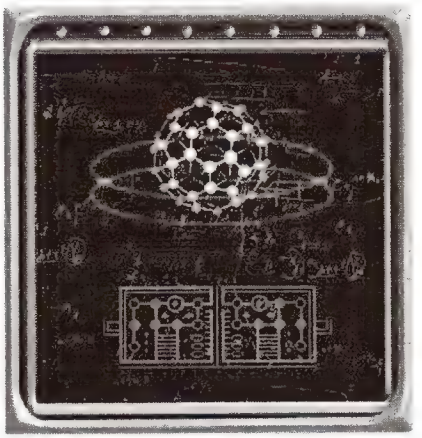


The advanced probes and sensors of the mid-21st century allow a more thorough study of stellar dynamics than has ever before been possible. This *is* that study.

This is the first of many intertwined steps on the road to the ultimate weapon in the universe—the Nova Bomb. That makes Solar Fusion an imperative eventually, but what about in the short run? Well, this technology also leads to the powerful Fusion Missile—without which it is darned near impossible to effectively attack

an alien base or other large facility. After Advanced Lasers and Gatling Lasers, Solar Fusion is a sound third research choice.

SYNTHETIC ELERIUM



The development of Synthetic Elerium is, no doubt, a great boon to the people of Earth—but is of limited use to you in the short run. The real Elerium stockpiled before mankind entered the Frontier is enough to cover your normal, everyday weapons needs.

This technology is vital to the development of the Nova Bomb, but it is by no means crucial in the early stages of the game. The best strategy you can adopt regarding Synthetic Elerium research is to sandwich it between topics that are important to your immediate success in the early to middle stages of the game.

TACHYON PULSER

It's not always possible for the scientists on Earth to glean every piece of information they need from simply examining leftover equipment and wreckage returned from a battle site. That means it's up to you and your pilots to occasionally capture alien ships intact for examination. The Tachyon Pulser disables shields and engines on a target so that you can do just that.

Of all the beam weapons in the game, the Tachyon Pulser is the only one that is a "must have." It is imperative that you capture at least one each of the alien Wraith, Spectre, and Phantasm fighters in order to complete your research. The sooner you can equip your ships with Tachyon Pulsers, the sooner you can start netting saucers, so make this one a top priority early in the game.

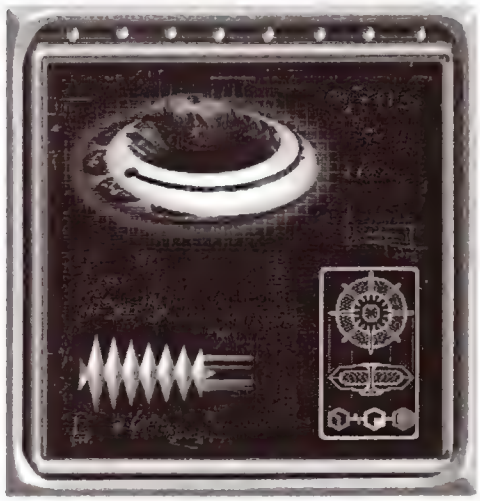
TRANS-DERMAL ARMOR

Available after you research Alien Hull Alloys, Trans-Dermal Armor is the most sophisticated physical protection you can install on an interceptor. It is both lightweight and very strong.

This is an important technology that you really shouldn't do without—the extra layer of protection it provides can mean the difference between life and death in difficult late-game battles. Although there are a lot of topics vying for your attention by the time Trans-Dermal Armor becomes available, you should make a point of squeezing this technology into your research schedule as soon as you can.

TRANS-DIMENSIONAL FIELDS

This is a pivotal technology that becomes available after you research the Phantasm saucer. It leads to the most effective shields available to you in the game (Trans-Dimensional Shields) and a powerful defensive system (the Cloaking Device). More importantly, completion of this topic allows you to download info on the Dimension Jump Drive—one of the technologies required before you can engage in the final mission.



By the time you have the chance to research Trans-Dimensional Fields, you'll no doubt desperately require more powerful shields for your ships. Well, this is your ticket to better protection, so take advantage of it. This is one of the few research topics so important that you should consider switching downloads in midstream so you can acquire it as quickly as possible.

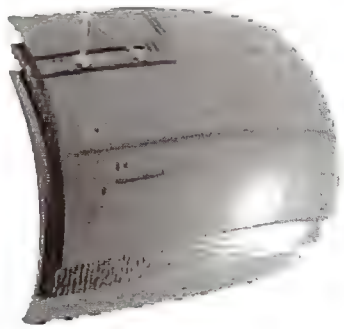
TRANS-DIMENSIONAL SHIELDS

Late in the game, you'll need all the protection you can get for your ships and bases. There's no better protection available than Trans-Dimensional Shields.

Of the three technologies made possible by Trans-Dimensional Fields, this is by far the most important. As soon as you get the "research download complete" message for that topic, start downloading this one. The sooner you do, the sooner you'll get a thicker layer of protection between your ships and the enemy.

TRI-TITANIUM ARMOR

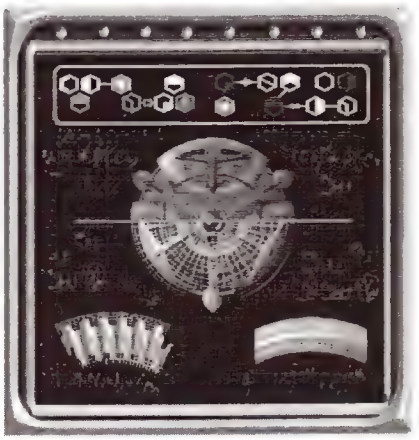
As soon as you complete research on Tri-Titanium Construction, you have the opportunity to download this upgraded armor technology.



The intermediate armor type in the game, Tri-Titanium Armor is just what you need to get you through those escalating mid-campaign battles. It's a little bulky and tends to slow you down a bit, but the extra protection more than makes up for the slight loss of speed. After you gain the ability to build Firestar interceptors, upgraded shields should be your first defensive priority—but better armor should run a close second.

TRI-TITANIUM CONSTRUCTION

Available after you research the Spectre saucer, this important technology upgrades your production capabilities for both ships and (eventually) armor.



In order to start an offensive push against the aliens, you need lots of firepower and ships that can stand up to some punishment. While Lightning II interceptors are great for dogfighting and can serve well in that capacity throughout the game, they are less than adequate when it comes to attacking any alien installation beyond, say, a mining platform. For bigger targets, you need to upgrade some of your ships. As soon as you can fit this topic into your schedule, do so. Once it is downloaded, you can immediately start production on an offensive fleet of Firestars.

TYPE 1 (WRAITH) SAUCER EXAMINATION

The analysis of a captured Wraith is the first of three required alien fighter examinations in the game. Each of the three leads to a number of valuable research topics that cannot be discovered any other way.

You should capture a Wraith as soon as you can—it's a lot easier in the early battles, when the enemy attack force is fairly small. The topics made available as a result of this examination include upgraded armor, faster Downlinks, better shields, and more. You must also complete this topic before you can receive Alien Message 2, so don't put it off any longer than necessary.

TYPE 2 (SPECTRE) SAUCER EXAMINATION

This is the second of the three alien ship examination topics. As with the Wraith examination, the completion of this research item leads to many possibilities for technological upgrades across the board. It is also a prerequisite for the reception of Alien Message 3.

Once you've got a Spectre, research it ASAP. Your technological progress depends on it.

Tip **Capture a Spectre as soon as these ships start appearing in combat. As a general rule, they make their game debut in small to medium-sized squadrons—one or two Spectres accompanied by a few Wraiths. They are easiest to capture at this point. Once the bulk of each alien squadron is composed of Spectres, things get a little more hairy.**

TIP-O-MATIC

TYPE 3 (PHANTASM) SAUCER EXAMINATION

The third and final spaceship you need to capture and examine is the Phantasm. The examination of this craft doesn't lead to as many topics as those of the previous two ships, but that doesn't make it any less important. In fact, one of the two technologies available after you research the Phantasm—Trans-Dimensional Fields—leads not only to the best shields available in the game, but to the Dimension Jump Drive as well. This technology is also a prerequisite for launching the final mission of the game.

Once again, you shouldn't put off researching this item. Your research queue is likely to be pretty full by the time you get around to capturing a Phantasm, but you have to make room or fall woefully behind the aliens in your technological progress.

IMPORTANT RESEARCH TOPICS

There are a number of research topics in *Interceptor* that are not vital to the progression of the game, but are extremely helpful to you. The following topics fall into this category.

CLOAKING DEVICE

About halfway through the game, you might start to notice that aliens seem to disappear and reappear during combat. No, your 3DFX card isn't giving out on you—the aliens have developed a Cloaking Device. (See Chapter 7 for details on cloaking.)

This is a useful technology, and you should add it to your "moderately important" list. Invisibility is no substitute for good shields and solid armor—these technologies should always come first—but it does provide you with a distinct advantage, especially when approaching large, heavily armed targets like alien outposts and bases.

DOPPELGANGER MISSILE

The Doppelganger Missile is one of the most advanced weapons technologies available in the game. This topic is the end of the line for its particular branch of the research tree.

Because of this—and because the Doppelganger Missile is primarily a decoy,

Tip **It is true that, for the casual player, Doppelganger Missiles are little more than a novelty, and are of very limited use. However, if you are willing to invest some time to develop the piloting strategies necessary, you'll find this missile very effective indeed.**

TIP-O-MATIC

and there are lots of cheaper defensive systems available—the Doppelganger Missile can easily be relegated to a low-priority research item.

For details on this and other weapons, see Chapter 5.

ECM TYPE 1 (ECM POD)

Electromagnetic countermeasures (ECMs) are designed to scramble the onboard targeting systems of incoming missiles, reducing their chance of hitting.

ECM technology is an offshoot of alien targeting systems. Though this technology allows you to produce ECM pods and modules that can provide some missile protection for ships and bases, the research priority for this topic is moderate at best. Make sure your shields and weapons are up to snuff before you start going for the more advanced special systems.

(Details on ECMs and other defensive systems can be found in Chapter 7.)

ECM TYPE 2 (ADVANCED ECM POD)

Like ECM Type 1, this technology is an offshoot of an alien targeting system—in this case the AATS. The research of this topic opens the door to better, more effective countermeasure systems for bases and ships.

As was true of its predecessor, you can put this defensive topic on the back burner in favor of more important weapons and defensive research.

ELERIUM TORPEDO

One advantage the aliens have always had over X-COM is a seemingly endless supply of Elerium-115, the element that powers all their technology and weapons systems. The Elerium Torpedo—their most basic projectile weapon—is superior in range, maneuvering capabilities, and explosive strength to your X-Winder Missiles.

However, this missile's edge over the X-Winder is really fairly minor. That would make this topic a very low priority, except that you usually get the opportunity to research Elerium Torpedoes fairly early in the game. If you've already completed research on Advanced Lasers and Gatling Lasers, you might as well get started on this topic and upgrade your missiles. Otherwise, you can probably hold out until a more effective missile upgrade opportunity comes along.

HEAVY LASERS

This is one of the two laser-weapon topics that become available after you download Advanced Lasers (Gatling Lasers is the other). It allows you to build the most powerful—and the slowest—of the three laser-based weapon systems.

Of the two advanced laser types, the Heavy Laser is a lower priority. Although well suited for attacking large, slow ships and stationary installations, this weapon shows its

glaring weaknesses in fighter-to-fighter conflicts. Since dogfights are your top priority early in the game, let Heavy Lasers wait until you are about ready to start an offensive push.

Tip **Although researching Heavy Lasers isn't terribly urgent, don't put it off forever. You should research this topic as soon as you have the ability to build the Emissions Targeting System, since Heavy Lasers leads to the Tracer Cannon and (eventually) the Tracking Tracer Cannon–two of the most powerful beam weapons in the game.**

TIP-O-MATIC

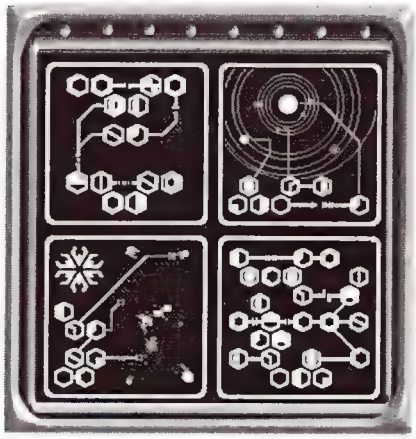
HUNTER PROBE

After you discover Vector Control Thrusters, you get an opportunity to explore several topics based on this oh-so-useful technology. One of these is a new brand of sensor probe that actually roams around its destination coordinates, covering a wide swath of space with its sensors.

As alien activity increases, the use of probes becomes increasingly important (see Chapter 7 for details). The more area you can cover, the better off you are. Although you might not need Hunter Probes right away, make time in your busy research schedule to fit them in before you get too far down the Alien Message/Doomsday Piece research path—say, by the time you receive Alien Message 3.

HYPER-DIMENSIONAL DATA TRANSFER

The farther you progress up the research ladder, the steeper the climb. Or, to put it nonmetaphorically, the file sizes of research downloads get bigger and bigger as the game progresses. Eventually, you reach the point where you need your research information



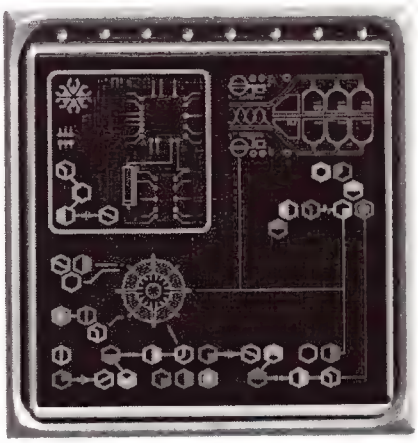
Tip **An alternate research strategy after you've examined the Wraith is to ignore all the other technologies available and go for Hyper-Dimensional Data Transfer first. If you can afford to delay your fleet upgrades long enough to do so, you can start upgrading your Downlinks earlier, thus making it faster in the long run to develop the other technologies available at the time.**

TIP-O-MATIC

faster, but you just can't afford to build and equip another base so you can research multiple technologies simultaneously. The solution lies in upgrading your existing Downlinks to faster models.

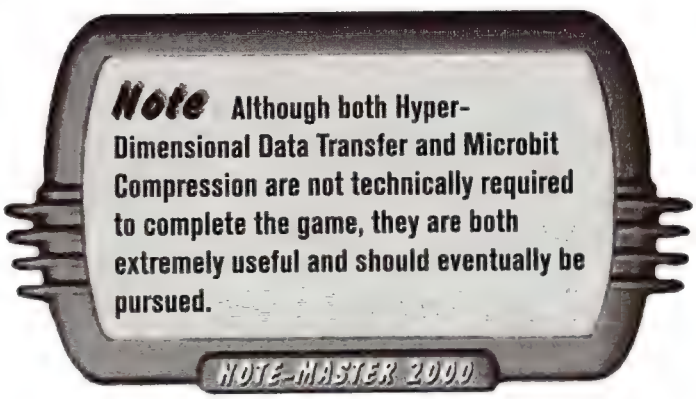
Hyper-Dimensional Data Transfer is the first of two Downlink upgrade technologies. Of the technologies available after you examine a Wraith saucer, this one runs a close third. After your interceptor and engine needs are taken care of, take the time to download Hyper-Dimensional Data Transfer. When you're done, you can upgrade your Downlinks and be prepared for the larger downloads ahead.

MICROBIT COMPRESSION



This is the second of the two research topics that, upon completion, enable you to upgrade your network of Downlinks to improve your research speed. After you download Microbit Compression, you'll be able to build the fastest Downlink available—the Hyper-Dimensional Downlink.

As with Hyper-Dimensional Data Transfer, when you research Microbit Compression is a strategic choice, as this is only one of several technologies made available through the research of a captured Spectre saucer. If you are in the midst of an all-out war, your short-term priorities dictate that you first develop technologies such as the Emissions Targeting System and Alien Hull Alloys. On the other hand, if your current fleet is capable of handling the alien threat for the time being, you should shoot for the better Downlinks and the research advantage they will provide in the long run.



PARALLAX TORPEDO

This alien multi-warhead missile can really make dogfights short. It uses sophisticated psionic projection technology that can lead to a rather interesting psionics-based weapons arsenal.

There are two reasons to jump on this technology as soon as you can. First, these missiles are very effective in combat (when used properly). Second, they are extremely hard to come by, so you should look at any captured specimen of this missile as a precious gift indeed. The Parallax Torpedo is well worth exploring. The topics that follow it—and

eventually lead to the novel and intermittently useful Doppelganger Missile—are more of a judgment call on your part.

PASSIVE CLOAKING TORPEDO

An offshoot of alien cloaking technology, the Passive Cloaking Torpedo is a truly unique weapon. When used in conjunction with some creative tactics, this missile can be quite a surprise to an unsuspecting enemy ship.

Still, of all the technologies related to Trans-Dimensional Fields, this is certainly the most frivolous, especially if you haven't learned the skills and tactics necessary to use the weapon properly. Like the Doppelganger Missile, this projectile can stay on the back burner until you develop other, more direct weapons systems.

PERMEATOR MISSILE

The study of advanced alien shielding—specifically, Electroplasmic Shields—leads to the Permeator Missile, a shield-piercing projectile that really boosts your firepower against the enemy.

This is an important weapon discovery, and should be granted moderate or high status in your weapons research efforts. You'll find it particularly useful to have Permeator Missiles available when you start facing Spectre saucers on a regular basis.

Tip **Although not critical to the completion of the game (and, thus, not "vital"), the Permeator Missile is, hands down, the best ship-to-ship missile in the game. You absolutely must try it. Once you do, you'll probably never use any other type of missile.**

TIP-O-MATIC

PHASE CANNON

The Phase Cannon is moderately powerful and quite fast—a pretty good beam weapon, all told. It is especially effective against shielded targets, to which it causes increased damage.

Tip **The Phase Cannon is another example of a weapon that is not game-critical, but is absolutely too good to pass up. Don't skip this one—you'll regret it if you do.**

TIP-O-MATIC

There are no prerequisites to this weapon. Eventually, you'll get a hold of one after a successful combat engagement. The shield-damaging capabilities of the weapon are a pretty good reason to research it early on, but the reasons get much more compelling as the game progresses. The Phase

Cannon is one of only two beam weapons that work properly against the Accumulator Shields used by alien Shade fighters. Once the Shades start showing up, you'd better have this technology ready and waiting so you and your ships have a fighting chance.

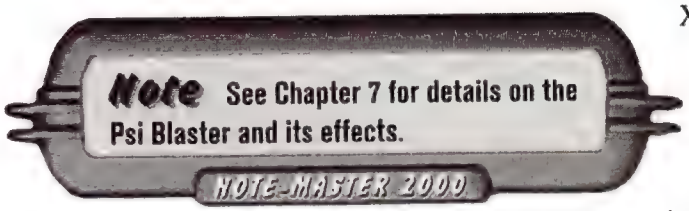
PLASMA PULSE CANNON

This is the alien equivalent of X-COM's Laser Cannon—a really basic, moderately effective beam weapon. You'll probably end up with one of these to research after one or two successful battles.

The Plasma Pulse Cannon has an edge over the Laser Cannon in power-consumption-to-damage ratio—but only a *slight* edge. Even though you might be tempted to jump on this research topic as soon as you obtain a Plasma Pulse Cannon for study, resist the urge. Although it takes two research topics to reach them, Gatling Lasers are much better weapons and well worth the wait if you can suffer a few extra weeks with your Laser Cannons.

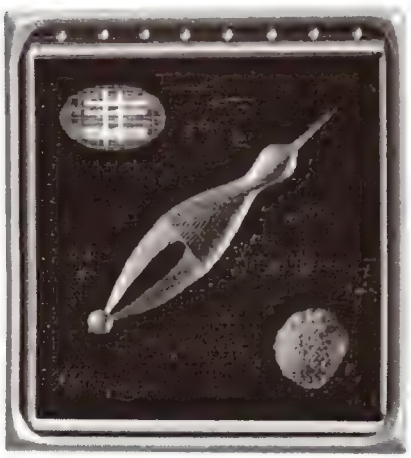
PSI BLASTER

Even in space combat, the aliens take any opportunity they can find to flex their psionic muscle. Through the use of the Psi Blaster, alien pilots can project their psionic energy through the vacuum of space, causing X-COM pilots no end of trouble.



As an X-COM weapon, the Psi Blaster is something of a fun novelty. Mind control of the aliens is not nearly so vital in *Interceptor* as it was in the previous X-COM games. Still, this weapon can be quite effective in the hands of a psionically gifted pilot. Although you should devote most of your research attention to more practical pursuits, the Psi Blaster is definitely a worthwhile topic when you hit a lull in your busy download schedule.

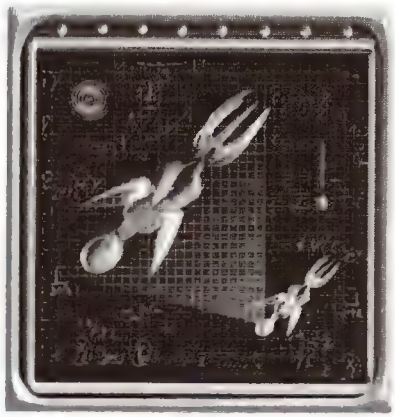
PSIONIC AMPLIFICATION



The study of two alien weapons—the Psi Blaster and the Parallax Torpedo—opens the door to advanced research topics in the field of psionics. This is one of them.

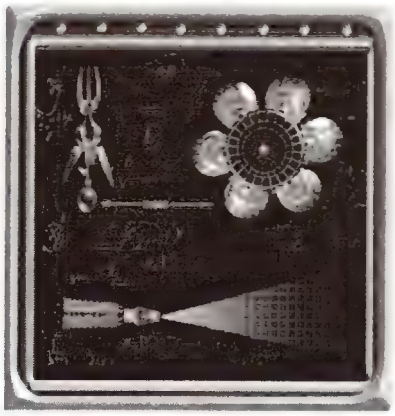
The ultimate and, indeed, the *only* goal of the psionic research path is to eventually discover the Doppelganger Missile. This is a powerful weapon in the right hands, but like the Passive Cloaking Torpedo, its effectiveness in battle depends on your tactical and piloting skills. Unless you

are willing to invest the time and effort to learn these skills, there is no point in starting down this path. You can certainly win the game without ever proceeding in this research direction.



PSIONIC HOLOGRAPHY

This is one of the advanced psionics topics that (along with Psionic Amplification) leads to Psionic Projection and, finally, to the discovery of the Doppelganger Missile. The caveats regarding Psionic Amplification apply here as well.



PSIONIC PROJECTION

The last of the three advanced psionics topics, Psionic Projection is the direct precursor to Doppelganger Missile research. If you've already read the advice given for the two prerequisites to this topic (Psionic Amplification and Psionic Holography), you've probably decided whether you want to pursue this research path to the end. If you've made up your mind to get Doppelganger Missiles, you should still put topics such as the Alien Messages and Doomsday Pieces ahead of this one, but there's no point in putting Psionic Projection on the back burner for too long.

SHADE FIGHTER EXAMINATION

Just as you progress from one spacecraft to another, each one more powerful than the last, the aliens enjoy a similar progression from the primitive to the potent. The Shade, the fourth and final alien fighter type, is the pinnacle of that progression.

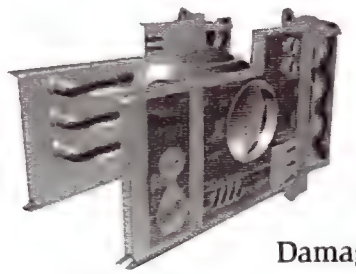
Note For details on the Shade and other alien ships, see Chapter 6.

NOTE-MASTER 2000

This topic's availability is contingent on your disabling and capturing a Shade fighter intact. This is not an easy task and, unlike examinations of the other three alien fighter types, is not required in order to win the game. If you do manage to capture a Shade, however, you'll reap a huge windfall of research topics. The Shade is equipped with just about every alien weapon and system under the sun, and can open up a huge number of new research avenues if you capture one shortly after they start appearing in the game.

SHIP DAMAGE CONTROL COMPUTER

Almost every system aboard an interceptor is self-repairing. As you take combat damage, you'll notice that (if you survive long enough) your systems slowly return to their normal levels of operation if they don't continue to sustain damage. The Ship Damage Control Computer accelerates this process, making your ship repair itself faster.



No doubt about it, this device comes in very handy. The unfortunate thing is that lots of other very useful technologies also become available when you examine a Spectre saucer. When weighed against the alternatives available, the Ship Damage Control Computer should generally be put on hold in favor of more pressing needs.

SIDESTEP MISSILE

A frustrating trait of alien ships—especially the Phantasms—is their ability to jink and dodge. This makes it really tough for ordinary missile guidance systems to effectively track them. Sidestep Missiles use alien vector-control technology to augment their maneuvering and tracking systems, making them much more effective than missiles with more mundane guidance packages.

By the time this technology becomes available, your need for effective missiles is growing with every alien encounter. As soon as you have the means, dedicate some research time to Sidestep Missiles. You won't regret it.

TRACER CANNON

Unlike most beam weapons, Tracer Cannons fire a continuous beam. This increases the amount of time the weapon's energy is in contact with the target, thus producing more damage than any pulsed weapon over the same period of firing time.

No doubt, the Tracer Cannon (like the Heavy Laser before it and the Tracking Tracer Cannon after it) is very powerful. In the hands of a novice pilot, however, it is not as effective in the long run as its less-powerful pulsed beam comrades. The best strategy is to pursue the other beam weapons first, then come back to this more powerful line at a later date.

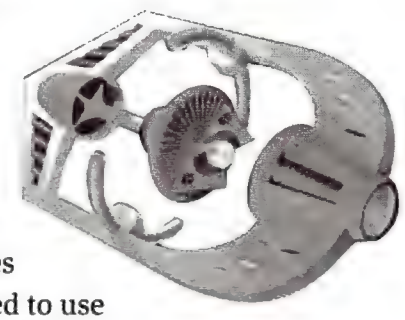
TRACKING TRACER CANNON

Very similar to the Tracer Cannon, this weapon sacrifices a bit of firepower in favor of an amazing targeting capability. Tied into the ship's AATS sensors, this weapon (once it acquires an enemy target) tracks the target automatically as long as the trigger is pressed and the target remains in range and within the ship's forward arc.

The same warning that applies for the Tracer Cannon applies here. Although this is a powerful and tempting weapon, you would be better served acquiring all other beam weapons first before moving into this line of research.

TRACTOR BEAM

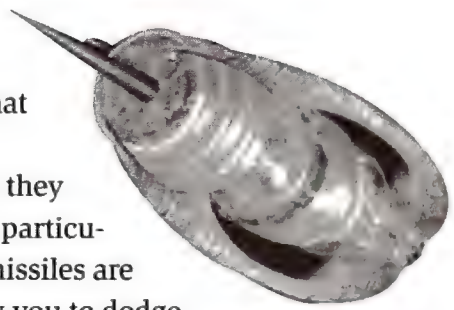
Tractor Beams allow you to grab a ship and tow it. Plain and simple.



Another of the research topics available at the start of the game, this is one that can wait for a while. The primary use of a Tractor Beam is to tow a disabled alien ship out of combat so that the ship becomes available for research. This is an important tactic in mid-game and beyond, where you may encounter a large alien force that you are incapable of defeating—but since disabled ships are always returned to your bases automatically after a successful battle, you probably won't need to use this tactic against the small alien squadrons early in the game.

VECTOR CONTROL THRUSTERS

Isn't it annoying how those alien ships seem to jink and dodge out of the way when you're trying to draw a bead on them? Ever wonder why it is that they can do that (besides the fact that the A.I. allows them to do so)? Well, wonder no more: they use Vector Control Thrusters (VCTs). Bet you'd like to get some for yourself, wouldn't you?



It's probably best if you get this technology into your data banks fairly early in the game, before you're overwhelmed by the influx of more important topics. Vector Control Thrusters—and the technologies that they make possible—are by no means required to win the game, but they *are* extremely useful and highly recommended. VCTs are particularly helpful in the latter stages of the game when alien missiles are flying fast and furious. Combined with ECMs, VCTs allow you to dodge weapons fire as well as the aliens do.

NON-CRITICAL RESEARCH TOPICS

Finally, we come to a group of research topics that have no direct bearing on the outcome of the game. Although these topics offer you useful tidbits of information, they don't impart

the ability to build new weapons or equipment, nor are they vital links to advanced technologies. Unless you have nothing else to research, you can pretty much ignore these items.

ACCUMULATOR SHIELDS

This is an advanced alien shielding technology used exclusively on Shade fighters. What makes this defensive technology unique is that it absorbs energy from beam weapons and uses this energy to reinforce the shields. Missile explosions do not have this effect, nor do Tachyon Pulsers and Phase Cannons. (See Chapter 7 for helpful hints on fighting ships with Accumulator Shields.)

The only way you'll ever have the opportunity to research this technology is if you manage to capture a Shade fighter, and there's really not much of a reason to do that. Just knowing what this shield system does is enough—and this book gives you that information. This research item is very low on the priority list.

AEREON

Aereons are a new breed of alien that start showing up about midway through the game. They are genetically engineered super-pilots who cause no end of trouble in a battle. (See Chapter 6 for complete details.)

> **Tip** **The main reason to research aliens is to learn the characteristics that affect the way they operate their spacecraft. As this information is available (in detail) in Chapter 6, there is no reason for you to pursue the alien species research topics.**
>
> TIP-O-MATIC

The first time through the game, it may seem important to learn all you can about the various alien species. In practice, however, the knowledge you gain from researching aliens is not all that vital—especially if you have this book in hand! Unlike previous X-COM games, where studying the aliens was necessary in order to progress to the end of the game, in *Interceptor* researching aliens is strictly optional.

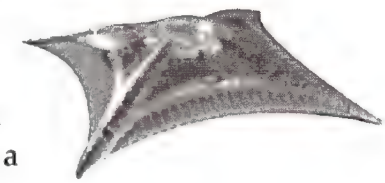
ALIEN DRONE

Alien Drones are remote-control vessels that are primarily used to defend alien freighters. These tiny craft usually start appearing about midway through the game. (See Chapter 6 for details.)

As a research topic, this item automatically becomes available right after you first encounter a Drone in combat. The UFOpedia report

gives an informative analysis of the Drones' abilities and limitations, but that's about it. There is no particular reason to research this topic unless there's nothing better to do.

BEAM MINE (ALIEN)



Apparently the campaign to end mine warfare on Earth pays off in the future—X-COM doesn't use mines. The aliens, however, are not quite as enlightened in their ways. They often use mines to protect their probes. This particular variety fires beam weapons instead of exploding, which makes it dangerous from a distance.

This technology becomes available as soon as you have encountered an Alien Beam Mine during a mission. The only thing you gain by researching it is a description—it isn't a vital link in the research tree. Suffice it to say that mines are dangerous and move on to more important topics unless you've nothing better to download.

DATA JAMMER PROBE

The last thing the aliens want is for you to use their own technology against them. They'll go to any lengths to stop you from downloading your research data and developing new weapons. Data Jammer Probes are deployed starting very early in the game. They add one more item to your list of things for your busy interceptor pilots to kill.

As a research topic, Data Jammer Probes are inconsequential—all you gain is a UFOpedia entry. Concentrate on important topics and leave this one to gather dust in the available research queue.

ETHEREAL

What X-COM veteran doesn't remember the Ethereals? These evil, psionically gifted creatures roamed the terror sites and alien bases of the First Alien War and made life hell for X-COM soldiers and commanders alike. But that was just the beginning. We now know that these aliens weren't even in their element when it came to ground combat. They were engineered to be space fighter pilots. And, boy, are they good!

As a research topic, however, Ethereals are less than pressing. Like the other alien-body-based topics, this one gains you nothing tangible and can be relegated to the bottom of your to-do list.

EXPLOSIVE MINE (ALIEN)

Another in the aliens' arsenal of mines, the Explosive Mine is very much like the naval mines used on Earth in the mid-20th century—only a lot more powerful.

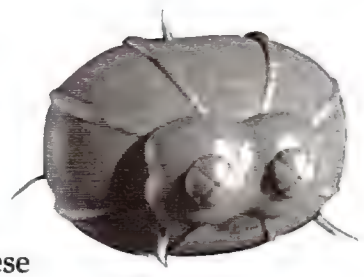
As with the Alien Beam Mines topic, the only purpose served by researching this topic is adding another bit of trivia to the UFOpedia. Since it is unimportant in the grander scheme of things research-wise, you can leave it until you have absolutely no other topic to explore.

HARBINGER ALIEN TUG

The first time you send a squadron out to investigate the "hyperwave disturbance" that accompanies a Doomsday freighter convoy, you'll encounter a new type of alien spacecraft—the Harbinger alien tug. This is the vessel the aliens use to tow the oversized Doomsday components to the black hole.

As research topics go, this one is pretty much the same as the alien probes and mines—all you get out of it is a new entry for the UFOpedia. Expend your research resources elsewhere.

MISSILE MINE (ALIEN)



The third type of mine employed by the aliens targets and fires missiles at unsuspecting X-COM pilots. In fact, Alien Missile Mines are capable of firing almost any missile an alien ship can fire. To top it all off, once their ammunition is depleted, these weapons turn into weaker versions of Alien Explosive Mines.

However, as with the other two alien mines, your research on this topic doesn't have much practical application. Don't bother researching this one until you have nothing else left in the queue.

MUTON

Any X-COM veteran worth his or her salt remembers Mutons. During the First Alien War, they were the roughest, toughest, baddest warrior grunts around. In the cockpit of a star fighter, though...not so much so.

As with the other alien pilots in *Interceptor*, there is no huge, pressing need to research Mutons. Everything you need to learn about them in their role as Frontier pilots can be learned from Chapter 6. Forget about this topic unless you really want to see that cool Muton picture. (Nah, you can see that in Chapter 6, too.)

PSILORD

This is one of the two new alien species that have come to plague mankind. These guys like to hang out on the edge of a battle, boosting the abilities of their fellow pilots as they conduct the proceedings psionically.

Once again—as with all the alien species research topics—place the Psilord on low priority. Sell off the corpses and make a few bucks. If you want to know what Psilords are capable of, just read Chapter 6 and save your research time for something more important.

SECTOID

Probably the most recognizable of all alien species, the Sectoids (known in UFO circles as "Grays," among other things) have been visiting Earth at least since 1947, when a Sectoid survey team decided to take an unscheduled vacation in the New Mexico desert. The Sectoid pilots in the Frontier seem to be a bit more adept than their unfortunate ancestors, however, and can pose quite a challenge for X-COM pilots.

The usual alien corpse research advice applies: don't bother. Read Chapter 6 and stick to other lines of research.

SENSOR PROBE (ALIEN)

One of the things that makes *Interceptor*'s A.I. different from the A.I. in most other strategy games is that the computer plays by almost the same rules as the player. That means that the aliens have to search for the player the same way the player searches for them—with probes and fighter patrols.

You are able to research Alien Sensor Probes as soon as you've had the pleasure of encountering one in battle. There's really no point in doing so, however, unless you've nothing better to download at the time; the only result is a UFOpedia entry.

Note **OK, OK. *Interceptor*'s A.I. *does* cheat from time to time. For example, the aliens are *far* more adept at finding you than you are at finding them. Guaranteed. They still use Sensor Probes, though....**

NOTE-MASTER 2000

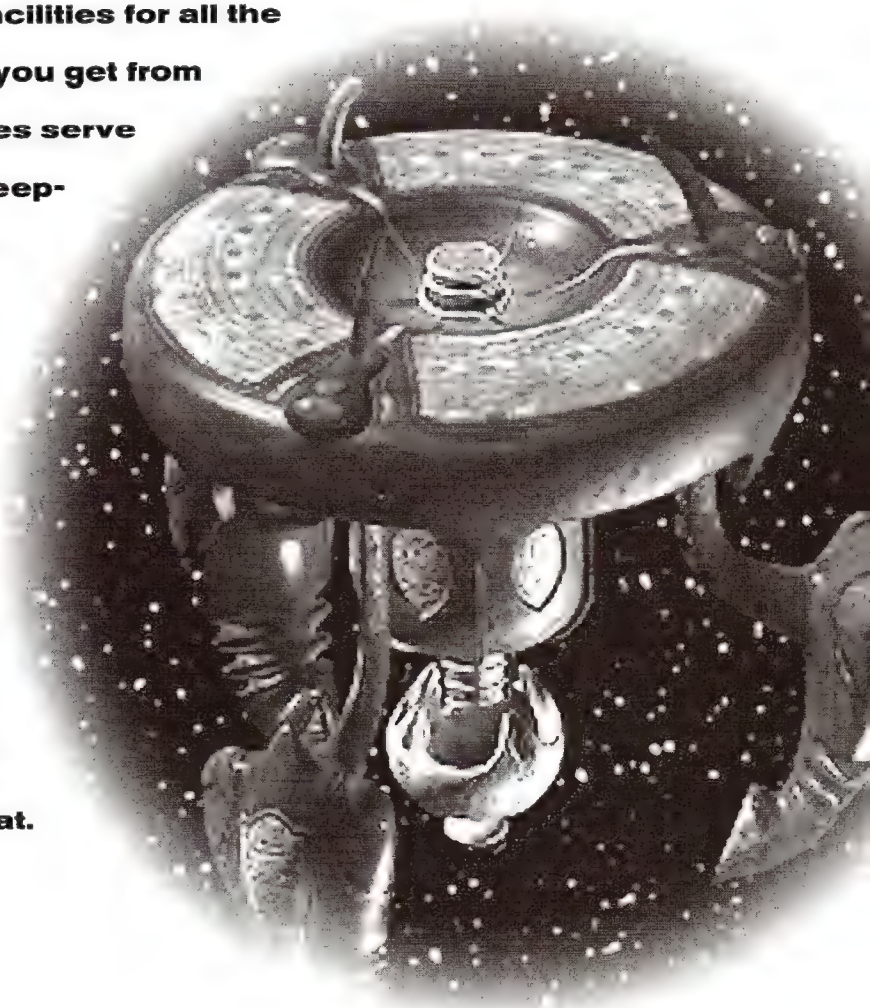
Chapter 4

BASES AND BASE MANAGEMENT

-COM'S FRONTIER DEFENSE FLEET consists only of small, one-man fighter craft. These tiny ships are capable of traveling vast distances and remaining independently operational for days at a time, but they can't stay in space forever. For one thing, there's all the wear and tear on the ship—and what about the pilot? This is why bases exist.

X-COM bases serve lots of roles. They are the homes away from home for your pilots, the docking and repair facilities for interceptors, the storehouses of equipment and weapons, and the download and storage facilities for all the knowledge and technology you get from Earth. Most importantly, bases serve as the staging point for all deep-space combat operations in the Frontier.

The following sections cover a wide range of base-related topics including general base operations, the functions and purposes of base modules, and strategic base placement and design, as well as how bases perform in combat.



THE CONCEPT OF MODULAR CONSTRUCTION

X-COM bases are entirely modular. The heart of the base is the central hub, known as the Main Base Structure. This is the power core and structural backbone of the base. Attached to this are a series of specialized modules, each of which performs a different base function.

There are a large number of generic module-attachment points located on the surface of the Main Base Structure. Many of these can accept numerous different module types, while some are more specialized and can only be used to mount a single module type. When you click the Add Base Module button on the Bases screen and select a module to add to the base, the available attachment points for that module are highlighted in the Base View. (See Figure 4.1.)

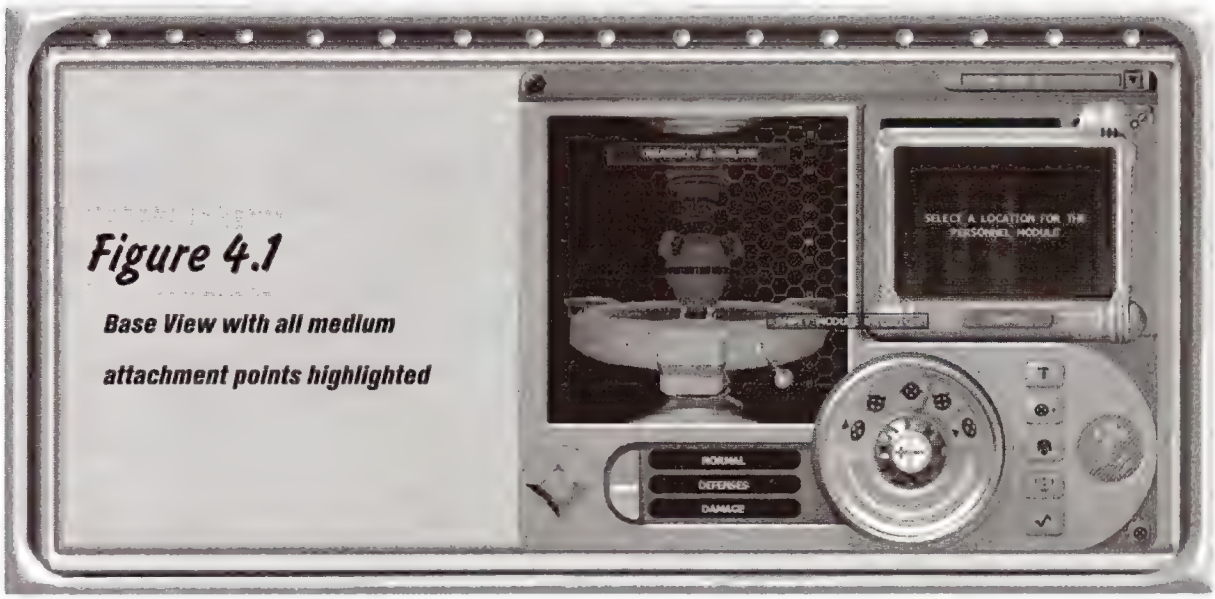


Figure 4.1

Base View with all medium attachment points highlighted

There are four different types of attachment point: small, medium, large, and special. These coincide with the sizes of the various base modules available. Table 4.1 shows how many of each attachment point type a base has, and lists some examples of the modules that can be mounted on each.

Table 4.1: Breakdown of X-COM base attachment points

Attachment Point	Number Available	Module Example
Small	15	Beam Weapon Defense Module
Medium	12	Deflector Shield Generator
Large	3	Hangar Module (exclusive)
Special	3	Downlink Modules (exclusive)

There is an upper limit to how many of certain types of modules can be mounted on a single base. These modules are shown in Table 4.2. The rest of the modules are limited only by the number of attachment points matching that module's size classification.

Table 4.2: Number limitations for module types

Module Type	Number Allowed
Shield Generator (any type)	1
Sensor Module (any type)	1
Communications Module	1
Hangar Module	3
Downlink Module (any type/combination)	3
Weapon defense module (any combination)	10

THE MODULES

At the start of the game, most of the modules you can add to your bases are already available in one form or another. Many of these modules can be upgraded as the game progresses and research sheds some light on better technologies. The following sections discuss each module's function and give advice as to its proper use. Table 4.3 lists all the vital statistics for each module type.

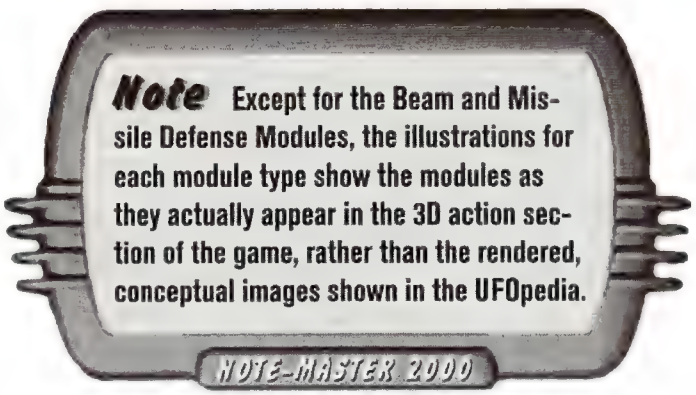


Table 4.3: X-COM base module statistics

Module	Size Class	Cost ($)	Build Time (Days)	Maintenance ($)	Hit Points
AATS Sensors	Medium	1,400,000	26	30,000	500
Advanced Damage Control Module	Medium	350,000	18	15,000	150
Advanced ECM Module	Medium	450,000	25	5,000	150
Beam Defense Module	Small	Variable*	Variable*	3,500	100
Cargo Module	Medium	150,000	10	5,000	300
Communications Module	Medium	500,000	12	5,000	200
Deflector Shield Generator	Medium	900,000	18	10,000	400
ECM Module	Medium	350,000	22	5,000	150
Electroplasmic Shield Generator	Medium	1,200,000	22	15,000	450

Module	Size Class	Cost ($)	Build Time (Days)	Maintenance ($)	Hit Points
Emission Tracking Sensors	Medium	800,000	18	15,000	450
Hangar Module	Large	200,000	20	25,000	400
Hypercom Downlink	Special	650,000	26	27,000	350
Hyper-Dimensional Downlink	Special	700,000	30	32,000	400
Main Base Structure	N/A	1,500,000	N/A	N/A	6,000
Medical Module	Medium	650,000	20	15,000	300
Missile Defense Module	Small	Variable**	Variable**	2,000	100
Personnel Module	Medium	400,000	16	10,000	200
Probe Launcher Module	Medium	100,000	12	2,000	75
Standard Downlink	Special	600,000	22	20,000	200
Standard Sensor Module	Medium	500,000	12	10,000	400
Tractor Module	Medium	500,000	15	17,000	150
Training Module	Medium	750,000	20	16,000	250
Trans-Dimensional Shield Generator	Medium	1,500,000	28	25,000	500

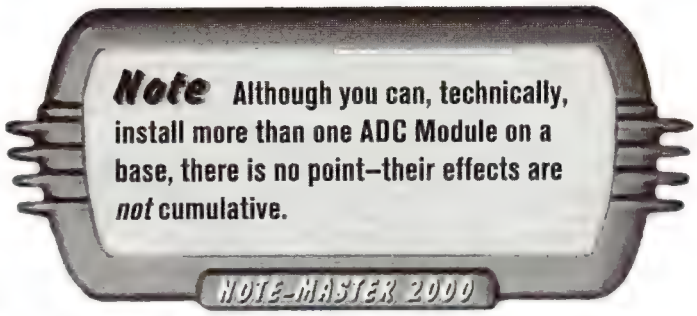
* See Table 4.4
** See Table 4.5

ADVANCED DAMAGE CONTROL MODULE

All X-COM bases have emergency maintenance crews who are ready to spring into action at a moment's notice to repair combat damage as it is inflicted. All module and hull damage sustained in an attack is automatically healed over time, even while the battle is raging around the base.

The addition of an Advanced Damage Control (ADC) Module doubles the normal damage repair rate.

(The automatic damage repair procedure for bases is described later in this chapter.) This is a great asset for bases that are victims of frequent attack, such as those established close to or inside enemy space. You can save on expenses and maintenance costs by not installing this module on bases that see little to no combat action.



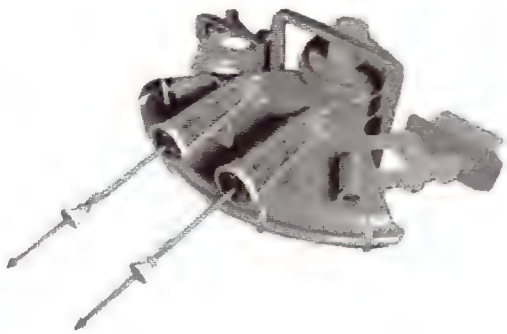
BEAM DEFENSE MODULES

To effectively defend your bases from alien attack, you should launch a squadron of interceptors to fight off the invaders. This is usually not a problem if you are managing your fleet well. When enemy activity is heavy, however, you might not be able to respond immediately

when a base comes under fire. That's where base-mounted weapons come in. A well-armed base has a half-decent chance of defeating an alien attack even if your interceptors can't make it to the party. Base weapons are also pretty darned helpful even when you *do* respond to an attack in person.

> **Tip** ***Never*** **depend on base weapons to take care of an attack if you can at all help it. No matter how many guns it has, a base is never as good at defending itself as you are at defending it from the cockpit.**
>
> TIP-O-MATIC

Beam Defense Modules are, as a general rule, the least expensive defenses you can mount on a base. Their cost and build time depend on the type of beam weapon they employ. (Not all beam weapons are available in base-mounted versions.) Table 4.4 lists all the available Beam Defense Module types, along with their build times and costs.



> **Note** **Moored to your bases' small attachment points, Beam Defense Modules have up to a 180-degree lateral firing arc, and can achieve elevations of up to 45 degrees.**
>
> NOTE-MASTER 2000

Table 4.4: Build times and costs for Beam Defense Modules

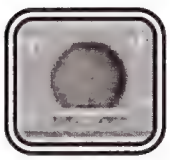
Beam Type	Build Time (Days)	Cost ($)
Gatling Laser	12	275,000
Heavy Laser	12	300,000
Laser Cannon	10	200,000
Phase Cannon	15	340,000
Plasma Pulse Cannon	12	250,000
Tachyon Pulser	12	270,000
Tracer Cannon	15	450,000
Tracking Tracer Cannon*	17	460,000

* Requires that the base be equipped with AATS Sensors

> **Tip** Base-mounted beam weapons have an unlimited reserve of energy. This makes base-mounted Tracer Cannons particularly deadly–but don't bother buying the Tracking version! Bases track targets just fine with normal Tracer Cannons.
>
> TIP-O-MATIC

The number and type of weapons modules you add to a base is a matter of need and personal choice. On bases near or in alien territory, you'll probably want to install as many as possible (10 Beam or Missile Defense Modules—or any combination of the two—is the maximum per base). Bases that are farther from the front lines can probably get by with three or four strategically placed mounts.

CARGO MODULE



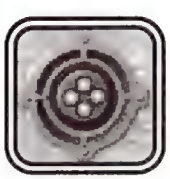
Storage space: There's never quite enough of it in everyday life here on Earth, and the same is true out in the Frontier. Cargo Modules store everything you use in the game with the exception of ships and pilots. This includes all the items you gather from combat sites as well as the equipment and weapons you order from outposts.

Each Cargo Module has 1000 Cargo Space Units (CSUs) of storage. Once all of a base's storage space is used up, you can no longer order or produce items for that base, and interceptors returning to that base from a successful combat sortie jettison any items they picked up from the battle site before they dock.

> **Tip** Just because Cargo Modules are cheap doesn't mean you should become a sloppy housekeeper. Sell off items you don't need–it makes room for the new stuff and nets you a couple of bucks on the side.
>
> TIP-O-MATIC

Cargo Modules are cheap to build and cheap to maintain. Build as many as you can at each base so you don't get caught without storage space just when you need it most.

COMMUNICATIONS MODULE



You've heard it in all aspects of life: Communication is the key to a good relationship. Actually, that doesn't really apply very well in this situation. Anyway, the function of a Communications Module is to maintain contact between interceptors and their home base.

It is absolutely *vital* that each of your bases be equipped with a Communications Module. If a base is not so equipped, it cannot communicate with the

ships you launch from its hangars. Oh, you can still *launch* them—but once the interceptor squadrons are in flight, you cannot relay orders to them. That means that these squadrons are limited to following their original flight plan and, upon arrival at their destination, engaging an enemy squadron (if there is one) or patrolling the destination coordinates until they run low on fuel and return to base. But if you can *communicate* with them, well, then you can make beautiful music together.

DOWNLINK MODULES

Downlink Modules are basically huge, wireless modems. These modules are the core of your research efforts—they are used to download research information from the Galactic Science Corps labs on Earth and store it in the UFOpedia data bank, where it is accessible to all X-COM bases in the Frontier. It's obvious that Downlinks are vital base components. Even without reading this strategy guide you *must* know that you don't have a chance to win if you don't research and develop new technologies.

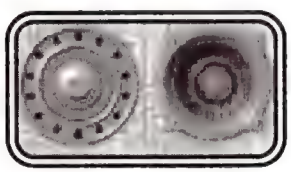
Tip **At the beginning of the game, before you do anything else, go immediately to the Bases screen and build two additional Downlinks on your initial base. This ensures that you are up to full download capacity at that base as soon as possible.**

TIP-O-MATIC

Each base can (and should) have a maximum of three Downlink Modules, which are mounted on the three special attachment points on top of the base. As new technology becomes available, you can upgrade your existing Downlinks to newer, faster models. When you do so, you must dismantle the existing module, thus impeding your research until the new module comes on-line.

ECM MODULES

Electromagnetic Countermeasures (ECM) generators create a sensor dampening field that is able to jam incoming missiles—or at least some of them—and prevent them from hitting their designated targets.



Installed on a base, ECM Modules can be a nice bit of extra insurance. Although far from 100 percent effective, an ECM Module (or Advanced ECM

Note **See Chapter 7 for details on the inner workings of ECM.**

NOTE-MASTER 2000

Module) can buy you a little extra time during a base-defense mission. A nice added bonus is that the ECM field extends away from the base, encompassing all friendly ships within one kilometer (two for the Advanced version) and providing them with the same level of protection as the base itself.

> **Tip** You can mount multiple ECM modules on a single base, but only one functions at any given time—they aren't cumulative. The effect of base ECM *is*, however, cumulative with the effects of ECM systems mounted on your interceptors.
>
> TIP-O-MATIC

Don't rely on ECMs to do all the work, though; it's no substitute for good shields.

HANGAR MODULE

The function of Hangar Modules is pretty obvious: They are the storage facilities, repair shops, and launch bays for your fighters. Each Hangar Module can house any three interceptors.

There's not much to say about this module, really. If you want more ships, you need more hangars. Each base can have up to three Hangar Modules

> **Tip** You really only need enough hangar space to house the fighters you have; but if you have the means, you should invest in an extra hangar at each base. That way, should a Hangar Module be destroyed while the ships housed there are out on a mission, there is still someplace for the interceptors to land. Otherwise, your ships will run out of fuel and hover immobile and useless near the base until a new hangar is built.
>
> TIP-O-MATIC

MEDICAL MODULE

When an interceptor takes an inordinate amount of battle damage, there is a possibility that its pilot might be injured. Pilots' wounds heal over time, but this can take a while. When an injured pilot is forced into combat, he is much more likely to die on ensuing missions.

> **Tip** You can install as many Medical Modules as you want on each base but, in practice, you will never need more than one for every ten pilots on the base. The pilots' recovery speed is such that it is unlikely that all the medical slots will ever remain full for more than a couple of days.
>
> TIP-O-MATIC

One way to quickly get your pilots back in full working order is to install a Medical Module on each base. When injured pilots are pulled from active duty and placed in a Medical Module, their wounds heal at twice the normal rate. Each Medical Module can house up to five pilots at a time.

MISSILE DEFENSE MODULES

Like Beam Defense Modules, the primary purpose of Missile Defense Modules is to protect your base from hostiles until you get off your duff and send some interceptors to thwart the attack. Base-mounted missile defenses have an advantage over their ship-mounted counterparts: unerring sensors and targeting. Bases never fire their missiles without a positive lock, and they are able to get one just about every time (though they *are* subject to the lock-time limitations imposed by the base's targeting system).

The big disadvantage of missile defenses compared to beam defenses is the ammunition cost. Just like ships, each Missile Defense Module has a limited supply of ammunition (though the available number of missiles is higher than for the equivalent ship-mounted systems). Which brings up a related good news/bad news situation: The good news is that, as long as there are missiles of the proper type stored in any Cargo Module on the base, the Missile Defense Modules automatically reload and continue to fire. The bad news is that this is a good way to exhaust your missile stockpile in a single battle.

Missile Defense Modules are available in six variations tailored to fire six different missile types. These are listed in Table 4.5, along with the build time and cost of each model.

Note The firing angles and arcs of Missile Defense Modules are identical to those of Beam Defense Modules.

NOTE-MASTER 2000

Note When purchased, Missile Defense Modules are equipped with a full complement of missiles.

NOTE-MASTER 2000

Table 4.5: Build times and costs of Missile Defense Modules

Missile Type	Build Time (Days)	Cost ($)
Elerium Torpedo	17	245,000
Enveloping Fusion Torpedo*	20	375,000
Parallax Missile	17	315,000
Permeator Missile**	17	295,000
Sidestep Missile*	17	325,000
X-Winder Missile	15	225,000

* Requires that the base be equipped with AATS Sensors
** Requires that the base be equipped with Emission Tracking Sensors (minimum)

Tip Although missile defenses are undeniably effective, Beam Defense Modules–especially those equipped with powerful beams like Tracer or Phase Cannons–definitely offer more bang for the buck. The ongoing ammunition cost for rearming multiple missile turrets can be outrageous.

TIP-O-MATIC

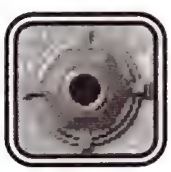
Tip This is another module where it doesn't hurt to hedge your bets. If a Personnel Module is destroyed in combat, any pilots assigned to that module who happen to be in space at the time are automatically discharged if there's no place to put them when they return to the base. If you spend a few extra bucks and build a backup Personnel Module, you won't lose those pilots.

TIP-O-MATIC

PERSONNEL MODULE

As with hangars, there's not much to say about Personnel Modules. Each one houses up to five pilots. When your need for new pilots exceeds your available living space, build more Personnel Modules.

PROBE LAUNCHER MODULE



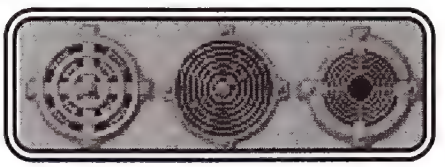
The only way you can hope to find alien installations is by actively searching for them. Using interceptor probes is generally impractical due to their relatively short range and the fact that they are needed for more urgent tasks than survey missions. The only practical way to explore the depths of space is to use long-range probes.

A Probe Launcher is necessary on any base from which you intend to launch probes (as if you needed to be told). You should have an active Probe Launcher on at least one of your bases.

SENSOR/TARGETING MODULES

> **Tip** Since each newly built base comes equipped with a Probe Launcher Module, you'll likely have no reason to build one. There is absolutely no reason to equip a single base with more than one such module.
>
> TIP-O-MATIC

Although constant use of probes is important in locating hostile objects, and your outposts take care of a lot of your detection tasks with their limited sensor grids, your greatest potential for constant sensor coverage is your base sensor net. As technology grows, so does your detection capability.



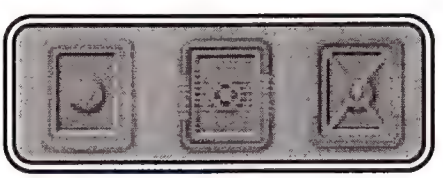
Each base is equipped with a single Sensor/Targeting Module. As newer, more powerful sensors become available, you have the opportunity to upgrade the sensor systems on your bases to increase their range and effectiveness. In addition to expanding detection range on the CSD, each sensor upgrade improves the base's weapon targeting capabilities in battle, and allows you to install more advanced base defenses that can fire better weapons.

When you upgrade a base's sensor/targeting system, there is no interruption in the operation of the current system. When the new system is completed, it automatically goes on-line and replaces the older module.

> **Note** Detailed coverage of sensors and targeting can be found in Chapter 7.
>
> NOTE-MASTER 2000

SHIELD GENERATORS

Though no object in the game has as many hit points as the main structure of an X-COM base, the base modules themselves are pretty fragile. For that reason, you need an extra layer of protection. Base shield generators work pretty much the same way as those found on X-COM interceptors—only they're a *lot* more powerful.



Every base is automatically equipped with a shield generator. It is to your advantage to keep up with changing technological trends and upgrade the shielding systems on your bases as new versions become available. As the game progresses, the chance of the aliens attacking your bases increases drastically.

> **Note** Each base can have but one shield generator. When you upgrade to a better system, the new module replaces the old one when it is completed.
>
> NOTE-MASTER 2000

TRACTOR MODULE

Bases are the perfect anchors for Tractor Beams—nothing can move them. When a base is equipped with a Tractor Module, the base A.I. uses it to capture enemy vessels and hold them so that they can be more easily targeted and destroyed. A base doesn't suffer from the same power restrictions as a small fighter, so bases are able to fire weapons while using Tractor Beams.

Tractor Modules, while useful in theory, suffer from one very basic problem: You can't count on your bases to use their tractor beams with any regularity. It's all up to the base A.I. While it's fun to watch bases snatch alien ships out of the sky, your base-improvement dollars are definitely better spent elsewhere.

TRAINING MODULE

Pilot statistics play a major role in *Interceptor*. Among other things, these characteristics determine how well pilots control their ships, how well they target and fire their weapons, and how susceptible they are to psionic attack. Many of your pilots' skills can be honed and improved in combat, but not all of them. That's where Training Modules come in.

The presence of a Training Module on a base allows your pilots to improve their flight skills without risking their lives in combat. Simply assign them to training for a month and watch them improve. Training is also the *only* way your pilots' psionic skills can be improved. If you have psionically challenged pilots (and you are unwilling to sack them and hire new ones), training is the only way to go.

> **Note** See Chapter 7 for details on pilot training.
>
> NOTE-MASTER 2000

BASES IN ACTION

Now that you are familiar with base parts, it's time to look at bases as a whole and how they function in the game. The remainder of this chapter discusses the placement, construction, configuration, and operation of X-COM bases.

LOCATION, LOCATION, LOCATION

Where should you build your bases? The location of the first base is always decided for you at the start of the game, but it's up to you to decide where you build ensuing bases—within certain parameters, that is.

You can operate up to eight bases simultaneously. That's more than enough to get the job done. The only rule regarding the placement of ancillary bases is that the new base must be within 1.5 light-years of an existing base. When you initiate the construction of a new base, the CSD map highlights the area in which you can place the base (see Figure 4.2).

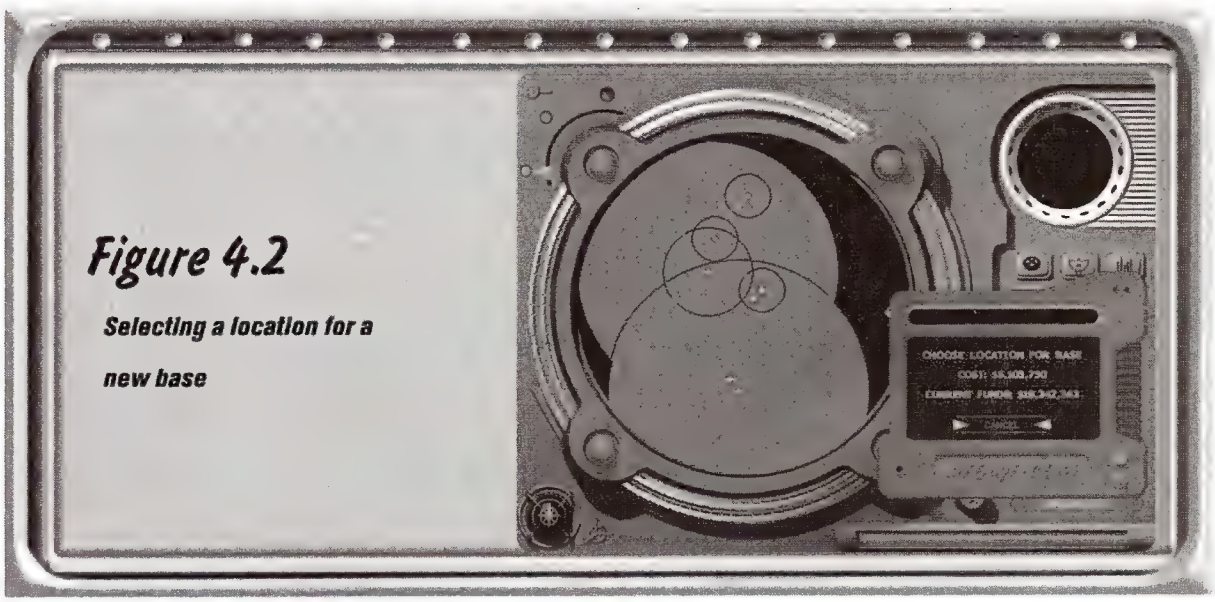


Figure 4.2

Selecting a location for a new base

You can place a new base anywhere within the highlighted region—which is, when you think about it, quite a large volume of space. When selecting a location within these confines, keep the following guidelines in mind:

- **Bases should be close to outposts.** This serves two purposes. First, it helps to protect the outposts from attack (and that's the main reason X-COM is in the Frontier). Bases that are too far away might not be able to send help in time to protect an outpost system from attack. Also, the farther you are from your outposts, the longer it takes to

Tip **Where *is* alien territory? If you look at your starting location on the Frontier Map on the CSD, you'll notice that (generally speaking) your starting position is near the edge of the map. If you start expanding toward the opposite edge, you are almost guaranteed to hit enemy space soon enough.**

TIP-O-MATIC

get supplies. The risk of freighter convoys falling prey to alien attack also increases with the distance the freighters have to travel.

- **X-COM *must* expand.** Keeping your outposts safe is your primary goal, but don't let that force you to bunch your bases close together. Due to their limited flight range, interceptors cannot travel great distances. Even with the best engines available, your ships won't make it all the way across the Frontier and back. That means that you need to build bases that are closer to enemy territory. Only by expanding in this manner can you take the battle to the aliens and start attacking *their* outpost systems.

> **Tip** When expanding your territory, build your new bases near star systems. When placing new outposts in the Frontier, the game looks for star systems that are close to bases. By building your more remote bases near stars, you almost guarantee that you'll have a few outposts nearby eventually (assuming your performance is up to par, that is...).
>
> TIP-O-MATIC

Only by achieving a balance between these base placement goals can you hope to achieve victory.

DISMANTLING BASES

You may find as the game progresses that a particular base just isn't serving a useful purpose. Perhaps it's too far away from the front lines, or it's in the middle of nowhere and thus difficult to keep supplied. If this is the case, you might consider dismantling the base.

Dismantling a base is not something to be undertaken lightly. After all, you spent a lot of money to build the thing in the first place. The best way to avoid having to dismantle a base is to put it in a good location to begin with. However, mistakes *do* happen. If you find a base is costing you more than it's worth, this is your best course of action.

When you dismantle a base, you are paid half the base's value based on the price of the modules attached and the Main Base Structure itself. Any equipment or ships

> **Tip** By quickly building and dismantling bases you can leapfrog your way across the Frontier and into alien territory, providing a work-around to the 1.5 light-year rule. Build a second base. Once that base is completed, start building a third one at the edge of the second base's build range. Once you start construction on the third base, dismantle the second. By doing so, you've increased your new base build range.
>
> TIP-O-MATIC

housed at the base that are not sold before the base is dismantled are also sold (at their normal sale prices), and all pilots are automatically sacked. If there's anything or anybody on the base that's worth saving, make sure you do so before giving the dismantle order.

BUILDING THE PERFECT BASE

What, exactly, constitutes the "perfect base"? That really depends on your needs. Because every new game of *Interceptor* is a little different than the last, your needs tend to change based on the circumstances at hand. The following sections discuss base composition and show some specialized base configurations that you might find useful.

INITIAL BASE LOADOUT

When a base is built, it comes equipped with the essential modules required to perform useful functions immediately. Your first base comes with the following modules attached to the Main Base Structure:

Note "Loadout" is a military term that refers to the items with which something is equipped. Were this term used to describe a car, the loadout of the average sedan might be a V-6 engine, power brakes, and an automatic transmission.

NOTE-MASTER 2000

- Cargo Module (1—stocked with 5 Sensor Probes and 10 X-Winder Missiles)
- Communications Module (1)
- Hangar Module (1—occupied by 3 Lightning II interceptors)
- Laser Turret (2)
- Personnel Module (1—occupied by 5 pilots)
- Probe Launcher Module (1)
- Standard Downlink (1)
- Standard Sensor Module (1)

When you build additional bases, they also come equipped with a standard complement of modules:

- Beam Weapon Defense Module (2—best type currently available)
- Cargo Module (1)
- Communications Module (1)

- Downlink Module (1—best type currently available)
- Hangar Module (1)
- Personnel Module (1)
- Probe Launcher Module (1)
- Shield Generator (1—best type currently available)
- Sensor Module (1—best type currently available)

HOW MUCH AND HOW LONG?

The cost of building a new base is calculated based on the cost of the Main Base Structure plus the modules included in the standard loadout. The building price increases as your technology level increases because new bases always include state-of-the-art Downlinks, shields, sensors, and weapons. The good news is that you receive a package discount for buying all the components at once.

The formula used to determine base cost is as follows:

```
New Base Cost=(1,500,000+Module Costs)*.75
```

The length of time it takes to build a new base is also determined by the module configuration. The total build time is the build time of the module that takes the longest plus one week.

STRATEGIC MODULE PLACEMENT

The strategic placement of new modules can have some bearing on your success when the aliens attack one of your bases. Depending on the type of module and the number of modules already attached to the base, you have a lot of choices when it comes to module placement.

When a new base is built, all the modules are placed randomly on attachment points of the appropriate size. It's luck of the draw, nothing you can do about it. Also, Hangar Modules and Downlink Modules are restricted in where they can be attached. Nothing you can do about that either. The most important module types that you *can* control the placement of are Personnel, Cargo, and Beam/Missile Defense Modules.

Personnel and Cargo Modules must be protected at all costs. If they are destroyed, all the pilots or inventory items housed in them are also destroyed. You want to put these modules in the most protected areas of the base: the six medium attachment points on the base's central column (three at the top, three at the bottom). These attachment points are much less accessible than those located along the outer ring.

As for weapons placement, choose the attachment points closest to the modules you want to protect most. The attachment points on the top and bottom of each hangar pod allow for the best overall weapons coverage, since they can fire up (or down—not both) and

laterally as well. You can only have ten active weapons mounts, so use them wisely. If you're maxing out, six on the aforementioned hangar pod points and four along the outer ring (near vital modules) works best. The least effective attachment points for weapons are the three on the bottom of the base.

> **Tip** You should always have weapons on the top three hangar pod attachment points. These are the only weapon positions that can effectively defend your Downlinks from attacks from above.
>
> TIP-O-MATIC

KEEPING TRACK OF YOUR BASES

You have access to a custom-generated Base Status Report for each of your bases that informs you of that base's current status at a glance. It is a good idea to consult this report from time to time; it provides you with up-to-the-minute information on everything from the current inventory in each of your Cargo Modules to the current repair status of all base components.

THE HEAT OF BATTLE

In battle, bases are controlled solely by the base A.I. You cannot give them orders. They fire their own weapons, activate and deactivate their own special systems, and repair themselves without your input.

Here's a brief look at what goes on with a base during combat.

> **Tip** In combat during base (and outpost and OPP) attacks, you can always determine the attacker currently posing the greatest threat by observing which enemy ship is occupying the base's attention.
>
> TIP-O-MATIC

SELF-DEFENSE

A base's primary goal in battle is self-preservation. The A.I. uses the base's weapons and special systems first and foremost to protect itself from attackers. That means that when a base chooses a target, it is always the one that poses the most immediate danger to it. If no ships are currently engaging the base, the base's weapons select targets by distance (closer targets get preference).

One more note on base target selection: Should you take it upon yourself to start shooting up your own base, the base (after a couple of verbal warnings) considers *you* to be its greatest threat and proceeds to blow you out of the sky. You have been warned.

RECEIVING AND REPAIRING DAMAGE

Once the base's shields have been penetrated, the Main Base Structure and all the attached modules are exposed and can start taking damage. If enemy fire hits a specific module, the damage is applied to that module. All other fire is applied to the Main Base Structure.

All base structures are self-repairing. As long as a module is not completely destroyed, its hit points slowly return to normal even during combat (though systems are repaired more quickly between combat engagements). The presence of an Advanced Damage Control Module doubles the normal repair rate both in and out of combat.

Note You can find more information on damage allocation and repair in Chapter 7.

NOTE-MASTER 2000

THE EFFECTS OF MODULE DESTRUCTION

For the most part, the destruction of a base module produces fairly straightforward effects: When the module is destroyed, it ceases to perform its function. (See the module descriptions earlier in this chapter for details on their functions.) In certain special cases, however, there are additional consequences and effects to consider:

- **Sensor Modules:** When the Sensor Module is destroyed, the base's detection capability is not entirely eliminated, but it does decrease in range to approximately .25 light-years.
- **Cargo Modules:** When a Cargo Module is destroyed, all of the cargo stored in that module is also lost.
- **Hangar Modules:** The destruction of a Hangar Module also means the destruction of all the ships housed therein. If the ships assigned to the destroyed hangar are in flight at the time and there is no other available hangar space at their home base, these ships are lost once they run out of fuel.
- **Personnel Modules:** All the pilots who are inside a Personnel Module that is lost in combat are killed.

Note Training Modules are different from Personnel and Medical Modules in the effects of their destruction. Pilots assigned to training are *not* considered to be inside the Training Module at all times, and are therefore unaffected should the module be destroyed.

NOTE-MASTER 2000

Pilots assigned to that module who are in flight at the time of the module's destruction are automatically sacked when they return to base if no other living space is available.

- **Medical Modules:** All pilots assigned to a Medical Module at the time of its destruction are killed.

Chapter 5

YOUR ARSENAL AWAITS

-COM INTERCEPTOR **gives you an unprecedented amount of control over your fate throughout the course of the game. Part of this control centers on the choices you must make regarding the ships and equipment you use in combat. Such decisions are not just economic—they are tactical judgments that ultimately lead to your victory (or defeat) in battle.**

The purpose of this chapter is to familiarize you with the vehicles at your disposal and the arsenal of equipment and weapons available for their customization. Once you've perused this information, your choices regarding equipment and ships should be a lot easier, and customizing interceptors to suit specific mission needs should be a snap.

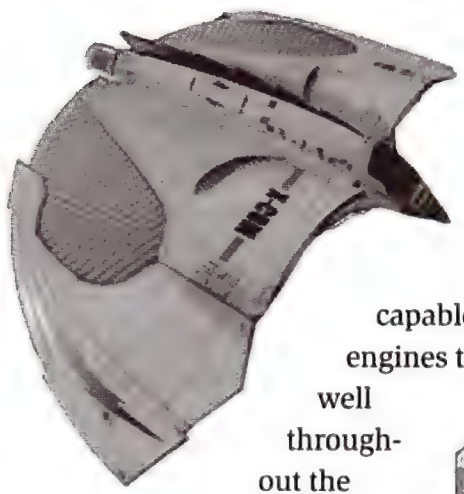
INTERCEPTORS

At the start of the game, you are limited to a single interceptor model—the diminutive but deadly Lightning II. As the game progresses and you begin to study the aliens' technology, you have the opportunity to build bigger and better ships to serve your ever-changing defensive and offensive needs.

The next few sections give you the lowdown on all three interceptor types.

X-1A LIGHTNING II

The Lightning II interceptor is the most basic craft of the bunch. Its small size and low mass make it ideal for dogfighting. Designed primarily for speed and maneuverability, the Lightning II has the fewest weapon and equipment hardpoints of the three X-COM fighters.



Properly equipped, this ship is a sporting match for alien Wraiths and Spectres. Even against the larger and more deadly Phantasm and Shade fighters, a Lightning II can hold its own in the hands of a capable pilot. As long as you upgrade their shields, armor, and engines to keep up with the times, Lightning IIs can serve you well throughout the game. They're cheap, fast, and readily available at all times.

Tip **When you need a new ship fast, the Lightning II is the way to go. You can buy one right off the showroom floor and have it shipped right away. (Both Firestars and Super Avengers must be manufactured.) Better to have a weak ship as a stopgap while waiting for bigger vessels to be produced than to leave yourself defenseless and hope the new Super Avenger will be done in time for the next alien attack.**

TIP-O-MATIC

X-2 FIRESTAR

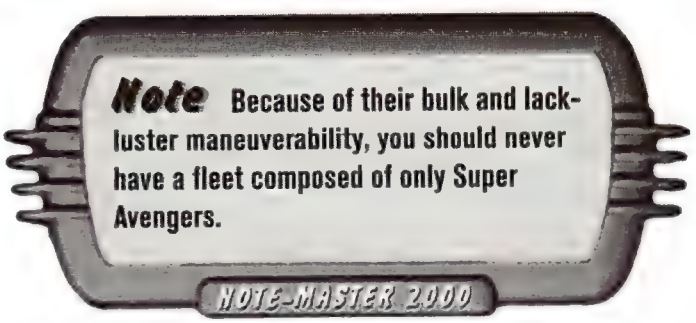
Without a doubt, the Firestar is the most versatile of the three ships available to you. While larger and heavier than the Lightning II, the Firestar remains sprightly and maneuverable in dogfight situations while sporting twice as many beam-weapon hardpoints and half-again as many missile hardpoints as its smaller predecessor.

Even after the larger, more powerful Super Avenger becomes available, the most effective interceptor fleet consists primarily of Firestars. Its dogfighting prowess, combined with its capability to carry and deliver the large missile payload necessary for the destruction of large stationary objects like mining platforms and outposts, make the Firestar a very useful craft indeed. (And how 'bout that spiffy paint job?)

X-3 SUPER AVENGER

The Super Avenger is the behemoth of the X-COM fleet. This solid, powerful craft bristles with weapons and equipment mounts—almost as many as the Lightning II and the Firestar combined. Its mass makes it slow and sluggish in ship-to-ship combat (compared to its smaller predecessors), but no other X-COM craft can surpass the Super Avenger's offensive abilities against large alien installations.

This is definitely the ship to take when you're assaulting alien bases. It also has an edge over the Firestar in assaults on outposts and mining platforms; a fully loaded Super Avenger can take out either of these facilities on its own, provided the alien fighter cover isn't too heavy. Ideally, Super Avenger offensive missions against alien installations should include a couple of Lightning II or Firestar escorts to take care of any alien saucers that might be guarding the facility.



The Super Avenger is also the best-suited ship for towing alien spacecraft (via the Tractor Beam), and the only X-COM ship that can carry and fire the Nova Bomb.

SHIP SPECS

Table 5.1 shows the specifications for each X-COM ship. The stats shown are as follows:

- **Hull Cost:** Cost of just the ship's hull (used for calculating the Stock Price of the ship, which is explained later in this chapter)

- **Upkeep:** The monthly charge for maintaining the ship
- **Hull Mfg. Time:** The amount of time required to build just the ship's hull, expressed in technician-hours (used in calculating overall manufacture time, which is explained later in this chapter)
- **Hit Points:** The amount of damage the hull can take before being destroyed
- **Beam Hardpoints:** The number of mounting positions for beam weapons
- **Missile Hardpoints:** The number of mounting positions for missile weapons
- **Special Hardpoints:** The number of mounting positions for special systems, such as Cloaking Devices and Tractor Beams

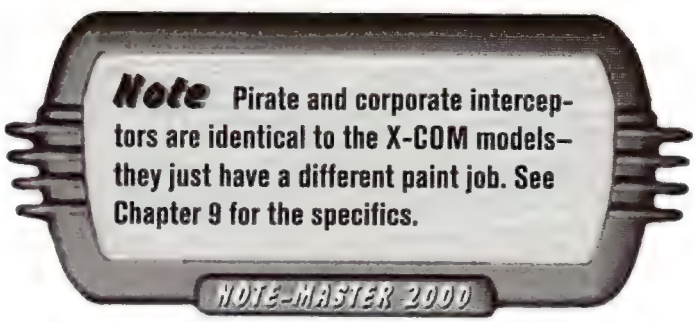


Table 5.1: X-COM fighter specifications

Ship	Hull Cost ($)	Upkeep ($)	Hull Mfg. Time (tech-hrs)	Hit Points	Beam Hardpoints	Missile Hardpoints	Special Hardpoints
Lightning II	400,000	12,000	N/A	100	2	2	2
Firestar	550,000	18,000	18,000	250	4	3	4
Super Avenger	800,000	22,000	27,000	400	4	4	6

SHIP-MOUNTED WEAPONS

When you start the game, your weapons outlook is pretty bleak—one beam weapon, one missile weapon, and that's it. Luckily, as technology progresses, so too does your weapons selection. Longer-ranged, more-powerful beam weapons and faster, more reliable missiles are just some of the fruits that can be plucked from the research tree.

BEAM WEAPONS

Beam weapons are the mainstay of the X-COM arsenal. Though they tend not to pack as much of a punch per shot as missiles, they have one *huge* advantage: unlimited ammo. As long as your weapons capacitor is charged and your weapons systems operational, you can keep firing to your heart's content.

Each beam weapon is different from the next in some way, and each has its own set of advantages and disadvantages as a result. The following sections describe each weapon type.

GATLING LASER

This is likely to be the first beam weapon advancement you'll make in the game—and if it's not, it should be! Of the two laser-based technologies that become available when you research Advanced Lasers, Gatling Lasers should definitely be your first choice for development.

Gatling Lasers are slightly less powerful on a per-shot basis than the basic Laser Cannon, but their high rate of fire more than makes up for this inadequacy. In a dogfight, it's sometimes extremely hard to get a bead on your target, and when you do the enemy might only be in your sights for a second or two at a time. The more hits you can score in those brief intervals, the more successful you'll be in the long run. Sure, Gatling Lasers use more than four times as much energy per second as Laser Cannons, but they have the potential to deliver more than twice as much damage in the same amount of time. Do yourself a favor: Dump the Laser Cannons and switch to Gatling Lasers as soon as you can.

> **Tip** **Gatling Lasers are excellent dogfight weapons, and work particularly well when fired linked.**
>
> TIP-O-MATIC

HEAVY LASER

The other laser-based weapon you can research after you're done with Advanced Lasers is the Heavy Laser. Although this weapon is better in some ways than normal Laser Cannons, its disadvantages outweigh its advantages—at least early in the game.

Heavy Lasers pack quite a punch, no doubt about it. They are almost twice as powerful as Laser Cannons on a per-shot basis, and almost three times as powerful as Gatling Lasers. This is offset by three major problems: The range and rate of fire for this weapon are half that of a Laser Cannon, and the energy cost is over *three times* as high.

Heavy Lasers are best used against slow or stationary targets at short range. In dogfights, the cycle rate is too slow to make this weapon a viable first choice, though it can work well on Firestars and Super Avengers when you have additional beam mounts

equipped with faster weapons. You can offset some of the speed disadvantage by firing this weapon singly rather than linked.

LASER CANNON

This is the X-COM fleet's mainstay weapon at the start of the game. It's nowhere near the greatest beam weapon available, but it's all you've got in the beginning. If nothing else inspires you to get on top of your research, fighting a few battles using just Laser Cannons will.

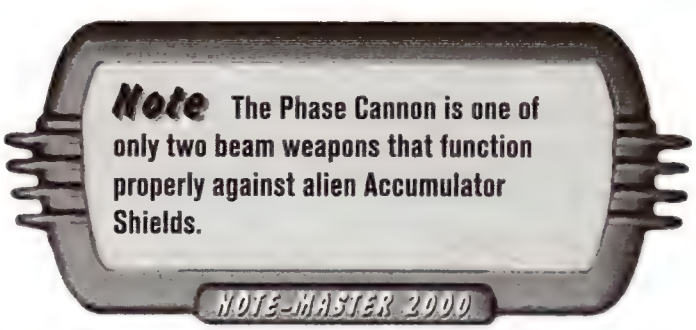
What can be said about Laser Cannons? They have good range, they're moderately fast, moderately powerful, and cheap. All in all, they are strictly average. The only real advantage of this weapon is that it uses very little power. With your beam weapons at full recharge, it's unlikely you'll ever be wanting for beam weapon power in a battle. You'll even have energy left over to reinforce the shields from time to time.

Though not as slow as Heavy Lasers, Laser Cannons still tend to lag quite a bit. Unless you have an enemy directly in your sights at close range, it is advantageous to fire the beams singly rather than linked.

PHASE CANNON

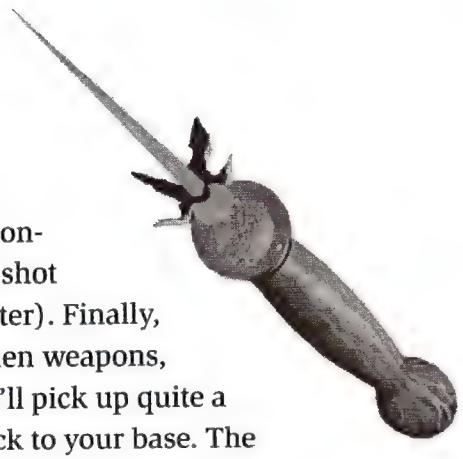
The Phase Cannon is specially designed to inflict severe damage on your target's shields—in fact, it delivers twice its normal amount of damage against shielded targets. This has the effect of knocking down the shields in short order and leaving the target's hull and armor plating open to attack.

Phase Cannons make excellent dogfight weapons. They are faster than both Laser and Plasma Pulse Cannons, and their special shield-weakening attributes tend to make short work of the less-powerful enemy fighters. This weapon is also very effective when used in tandem with other beam weapons: The Phase Cannon knocks out the shields while the other weapon goes to work on the armor and hull. Against larger targets, a fleet of interceptors sporting Phase Cannons can be just what you need to take down the shields fast and expose the vulnerable target beneath.



Because they are relatively fast, Phase Cannons work well both linked and unlinked against all but the fastest moving targets.

PLASMA PULSE CANNON

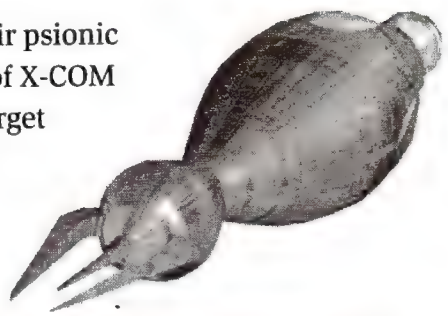


The Plasma Pulse Cannon is the alien equivalent of X-COM's Laser Cannon: a basic beam weapon with average performance.

However, three factors make Plasma Pulse Cannons slightly better weapons than Laser Cannons. First, they consume less power and deliver (slightly) more damage per shot than lasers. Second, they have longer range (by a kilometer). Finally, and perhaps most importantly, they are very common alien weapons, especially in the beginning of the game. That means you'll pick up quite a few after successful combat missions and bring them back to your base. The result: free weapons. This factor alone makes it a good idea to research this weapon and keep some around in your stores.

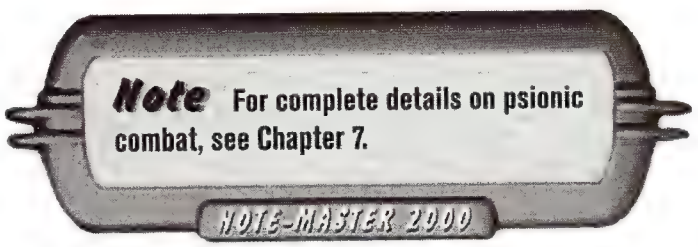
Like Laser Cannons, Plasma Pulse Cannons are best fired singly in most situations.

PSI BLASTER



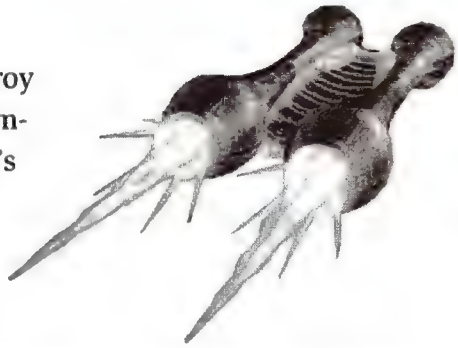
Psi Blasters are the means by which the aliens project their psionic energy through the vacuum of space and into the minds of X-COM pilots. A successful hit from this weapon can cause the target pilot to panic and leave the battle area or even become an alien pawn for a short period of time.

Even when you get it for yourself, this is definitely a weapon to be used sparingly. Unless a pilot has a super-high psionic rating, don't even *consider* equipping their ship with a Psi Blaster. (When your own ship is equipped with this weapon, the effectiveness of the attack is judged based on the psionic abilities of the pilot for whom you are flying.) You can't afford to miss with this weapon. Its rate of fire is extremely slow—not that it matters, since the energy cost per shot is so outlandishly high that two shots are about all you can get off before you are forced to wait for the weapons capacitor to recharge.



Still, when you have the psionics ability to make it work, there's no better way to thin out a battlefield than to scare some of the enemy pilots away and turn half of the rest against their companions. Mostly, though, this is a novelty weapon and you should never rely on it too much. (By the way, *never* fire Psi Blasters linked.)

TACHYON PULSER



Tachyon Pulsers are beam weapons designed *not* to destroy their targets. They are unique in that they only inflict damage on shield and engine systems. Once the target vessel's shields are down and its engines off-line, the target is permanently disabled and easy to capture.

If there is one beam weapon that is absolutely vital to your success in the game, it's this one. To make it through the research tree, you are required to capture one of each alien ship (with the exception of the Shade), and you can't capture ships without Tachyon Pulsers.

Tachyon Pulsers are relatively fast, and work well when fired singly or linked. Just don't fire them in full-guns mode in conjunction with other beam weapons, or you'll risk destroying the target.

> **Tip** Make sure you don't send out a ship armed exclusively with Tachyon Pulsers unless your sole mission is to disable and capture ships. If you take a ship so armed out to destroy an alien probe, for example, you'll be out there for a long time! Unless the target has shields and/or engines, Tachyon Pulsers have no effect on it.
>
> TIP-O-MATIC

TRACER CANNON

The Tracer Cannon is the most powerful weapon in the game. Instead of pulsed bursts, it fires a continuous stream of energy, inflicting its full damage rating each second its beam remains in contact with the target.

Small ships with weak shields beware! If you can keep the target in your sights, a Tracer Cannon can pop it like a balloon in a matter of seconds. Even larger, better-shielded ships suffer greatly at the hands of this weapon. The major drawback here is the energy cost—a fully charged weapons capacitor set to full recharge can only sustain a Tracer Cannon beam for a few seconds at a time. That means you have to use the weapon judiciously, or suffer through long waits as the weapons

> **Tip** Beware of alien bases equipped with Tracer Cannons. When there are no power limitations, this weapon means certain death.
>
> TIP-O-MATIC

capacitor recharges. Tracer Cannons work best in combination with a weapon whose power consumption is lower. For example, on a Firestar equipped with two Tracer Cannons and two Gatling Lasers, you can use the Tracers to take down the target's shields and weaken its armor, then finish it off with the Gatling Lasers.

Because Tracer Cannons fire in a continuous stream, there is little difference between firing the weapon singly and firing it linked. You are advised, however, *not* to fire in full-guns mode on a ship equipped with this weapon. If you do, your weapons energy drops to nothing before you can blink.

TRACKING TRACER CANNON

What could be better than a super-powerful, continuous-beam weapon? How 'bout one that automatically tracks your target, so all you have to do is keep the target generally in front of you? That's the Tracking Tracer Cannon in a nutshell.

This weapon is almost identical to the Tracer Cannon, except that it sacrifices some range and firepower in return for the ability to track. This is a fair tradeoff, especially when you consider that the power consumption curve is a little less severe for the Tracking Tracer. All in all, this is a very choice weapon if you use it wisely.

All the hints and cautions that apply to the Tracer Cannon apply to the Tracking Tracer as well.

BEAM WEAPON SPECS

Table 5.2 shows the specifications for each beam weapon. The stats shown are as follows:

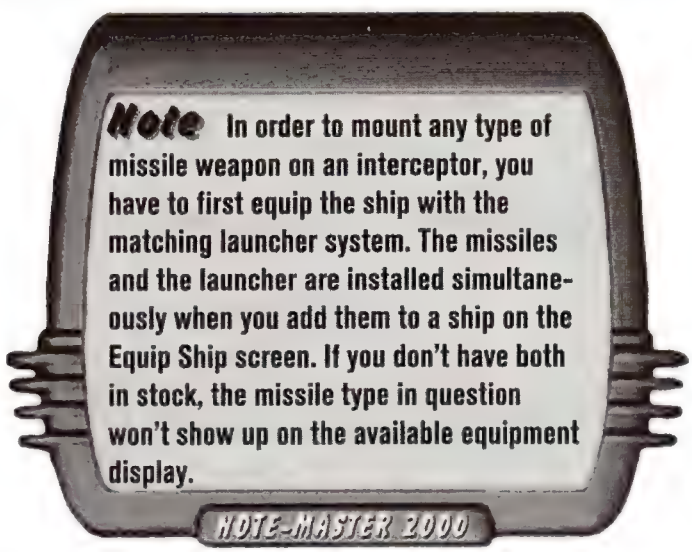
- **Cost:** The purchase or manufacture price of the weapon
- **Mfg. Time:** The amount of time required to build one weapon, expressed in technician-hours
- **Range:** The maximum range of the weapon in kilometers
- **Damage:** The amount of damage each shot inflicts on a target
- **Energy Cost:** The number of energy points drained from the weapons capacitor for each shot fired

- **Rate of Fire:** The number of shots the weapon can fire each second.
- **Hit Points:** The amount of combat damage the weapon can take before it is destroyed

Table 5.2: Beam weapon statistics

Weapon	Cost ($)	Mfg. Time (tech-hrs)	Range (km)	Damage	Energy Cost (pts/sec)	Rate of Fire	Hit Points
Gatling Laser	250,000	500	3	25	8	6	25
Heavy Laser	275,000	700	2	65	37	1	30
Laser Cannon	182,000	N/A	4	30	10	2	20
Phase Cannon	300,000	800	5	65*	12	3	25
Plasma Pulse Cannon	190,000	750	5	32	9	2	25
Psi Blaster	325,000	1,500	2	Special	450	1	45
Tachyon Pulser	195,000	650	6	45**	10	3	25
Tracer Cannon	225,000	750	3	30***	25***	Continuous	30
Tracking Tracer Cannon	300,000	950	2	25***	22***	Continuous	20

* Damage is 50% greater against shields
** Damages only shields and engines
*** Per second



MISSILES

Although beams are by far the most commonly used and economical weapons in the game, there's nothing like a couple of well-placed missiles to knock down enemy shields. This is especially true when you attack large installations such as bases and outposts. Missiles tend to pack way more damage into each shot than beams.

The following sections describe all the missiles available in the game and the situations in which they work best.

DOPPELGANGER MISSILE

The Doppelganger Missile is the only missile in the game that isn't really designed to inflict damage of some sort. Rather, it is an extremely elaborate decoy device that is meant to send enemies on wild goose chases while you get them in your sights.

Within seconds of leaving the launch rack, a Doppelganger Missile uses holo-projection devices to project an image around itself that is an exact copy of the ship that fired the weapon. The missile then proceeds to follow its target, making simulated attack runs to draw enemy fire. With the attention away from yourself, you have the opportunity to get into firing position—or run away, if that's your preference.

How practical is this weapon? Well, considering the cost and the amount of research it takes to discover it, not very. Still, it's a gimmick that can really pay off, since it's quite an effective way to keep the enemy off your back in battle. It's an especially nice weapon to have along when you don't have any wingmen to draw fire…er, back you up.

ELERIUM TORPEDO

The Elerium Torpedo is the staple weapon of the alien missile arsenal. Early in the game, you're likely to see the aliens lob quite a few of these babies your way.

As missiles go, Elerium Torpedoes are a solid step above X-Winder Missiles (the X-COM mainstay projectile at the start of the game). They are only slightly faster than X-Winders, but when they manage to score a hit, the damage is noticeably higher.

Despite their higher damage potential, Elerium Torpedoes aren't really worth your while. There are a lot of better missiles just around the corner, and you should be able to discover and research them long before your X-Winders become completely obsolete and unusable.

ENVELOPING FUSION TORPEDO

This clever weapon is just the ticket for making targets vulnerable in a dogfight. Since, on the average, the enemy tends to evade missiles by running in the opposite direction, most of the damage you score with projectiles is applied to the target's rear shields. Enveloping Fusion Torpedoes work differently, though. It doesn't matter from what direction they hit: They apply their explosive force equally to the target's front and rear shields.

The nature of this weapon makes it very useful indeed. By taking both shields down equally, you gain the opportunity to make strafing runs at the target from any

Note **Regardless of whether you find Enveloping Fusion Torpedoes useful, don't neglect them in your research. Until you research this weapon, you cannot discover the oh-so-useful (and pivotal to the game) Nova Bomb.**

NOTE-MASTER 2000

direction. This tactic works best on small fighters, of course. Don't even bother using Enveloping Fusion Torpedoes against large structures like bases, outposts, and mining platforms unless you have no other choice—you'll just be wasting your money for results you could have achieved with a missile that deals its damage in a more traditional fashion.

FUSION MISSILE

If you've ever tried using Fusion Missiles in a dogfight, you've probably found yourself extremely frustrated. Their tracking capability is just fine, but their speed? Forget about it. Just about anything that moves can leave this weapon in the dust. So why would you ever carry this weapon into combat? One word: damage.

Fusion Missiles are designed with one specific purpose in mind, and that's the destruction of large, stationary targets. With conventional missiles and beam weapons it could take just this side of forever to take out an outpost or a base, but a few well-placed Fusion Missiles can go a long way toward destroying just about anything.

If you want to take the fight to the aliens—and you had *better* do so sooner or later—then you *must* have this weapon. Just make sure that you don't send a ship into a dogfight armed only with Fusion Missiles. Although you might get in a lucky hit occasionally (if you do, you'll vaporize just about any fighter in the game), chances are you'll never be able to take down any moving target faster than a freighter with this weapon.

NOVA BOMB

The UFOpedia description of this weapon says that the scientific community wants to ban the Nova Bomb and erase all evidence of its invention and existence. Can you blame them? This is a weapon designed to destroy a star system and all its planets by causing a supernova in the system's star. Afterwards, all that is left is a black hole and a lot of microscopic interstellar dust. You don't need a missile lock on anything to fire the Nova Bomb—just shoot, and the missile automatically sets course for the nearest star.

Because of its massive size—it's almost as big as a Super Avenger interceptor—it takes a while for the Nova Bomb to accelerate. During the first 30 seconds of flight, the weapon is extremely vulnerable to enemy fire. After the missile has been in flight for 30 seconds, it accelerates. Shortly thereafter, it accelerates once more until, finally, after a total of 60 seconds in flight, the Nova Bomb enters hyperspace and races toward the star.

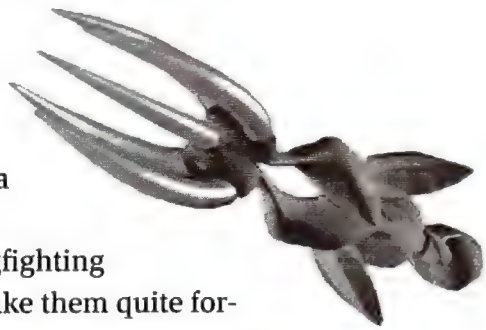
The Nova Bomb is an awesome, powerful weapon. It is one of the necessary components of the final game mission—it's the only weapon that can destroy the Doomsday

Weapon (indirectly, of course). Because they are so expensive to build and so easy for the enemy to thwart, Nova Bombs shouldn't be used frivolously. You should concentrate on more conventional means of combat until you are ready to embark on the final mission.

> **Tip** If you manage to successfully launch a Nova Bomb during an attack on an alien outpost or mining platform, you will obliterate the entire system, and get credit for destroying the outpost and all the mining platforms. Just make sure you hyperspace out of the battlefield after the Nova Bomb has safely reached full velocity. Your interceptor's onboard computer provides a countdown that keeps you abreast of the missile's progress.
>
> TIP-O-MATIC

PARALLAX TORPEDO

Parallax Torpedoes are both confusing and deadly. When they are first fired, they emerge as a single warhead. A short distance from the launching ship, they split into three separate warheads, revolving around one another in a deadly spiral as they track their target. The catch is that only one of the three warheads is real. A target pilot who is inclined to shoot the missile down has only a one in three chance of aiming at the real warhead.



Parallax Torpedoes are quite worthwhile as dogfighting weapons, where their speed and tracking ability make them quite formidable and the three-warhead illusion makes target pilots nervous. You could make a better choice against large stationary targets, however, because of the Parallax Torpedo's mediocre warhead yield.

> **Tip** Make sure you don't fire Parallax Torpedoes when you're close to your target. The warhead doesn't split until it is a quarter to half a kilometer from your ship. If you fire at a target that's too close, you are robbing yourself of this missile's defining feature.
>
> TIP-O-MATIC

PASSIVE CLOAKING TORPEDO

This is the closest X-COM comes to using mine warfare against the enemy. Passive Cloaking Torpedoes don't fire like normal missiles. Instead of locking onto an enemy target to fire the missile, you simply fire into space. The torpedo drops off the missile launcher

and immediately cloaks itself. Invisible to visual and sensor detection, the torpedo sits and waits for a victim.

Once an enemy ship passes within one kilometer of the torpedo's position, it instantly locks onto the ship, decloaks, and accelerates to chase the target. If the missile loses target lock (and it hasn't run out of fuel), it re-cloaks and waits for another victim.

Passive Cloaking Torpedoes are a great way to surprise the enemy, but it takes a lot of practice to use them to their greatest advantage.

Multiplayer Tip This weapon is particularly effective in multiplayer deathmatches. Your friends will never know what hit 'em.

MULTIPLAYER TIP-O-MATIC

PERMEATOR MISSILE

The knowledge gained from studying alien shielding and targeting systems gives you access to a missile that is able to partially bypass all forms of shielding and cause damage to the armor, hull, and internal systems of a ship while the shields remain in place.

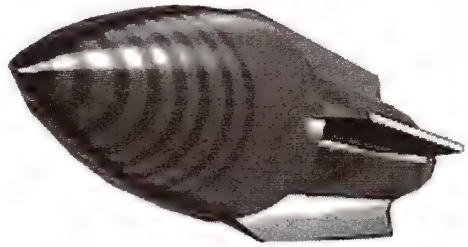
Permeator Missiles are a great advance in missile technology. They are extremely effective against shielded targets, dealing half of their total damage to internal systems with each hit. They are also superfast, making them excellent dogfight weapons. Even against large targets, this weapon can play an important role. This is especially true when it comes to alien bases. They're not much help in blowing up the *entire* base, but launch a few well-placed Permeator Missiles and you can kiss most base modules goodbye.

Note Don't let these missiles' apparently poor turning radius fool you—even when a Permeator Missile grossly overshoots its target, its superior speed almost always allows it to catch up and hit.

NOTE-MASTER 2000

SIDESTEP MISSILE

One of the problems with the missiles available early in the game is that they have difficulty maintaining a tracking lock on the target due to the aliens' ability



to jink and dodge so adeptly. The problem is that most missiles' turning radii are just not tight enough to keep up with a skilled enemy pilot.

Sidestep Missiles use the aliens' Vector Control Thruster as the basis for a new drive system that allows a missile to dodge and sideslip as it keeps up with the target's movements. These missiles are by no means infallible, but they are a lot more difficult for the enemy to shake.

X-WINDER MISSILE

This is the old tried-and-true X-COM projectile that seems to hang around throughout the entire campaign. X-Winders are simple, slow, low-yield weapons. Nevertheless, these missiles are indispensable early on, and remain the only weapon you can purchase outright (as opposed to manufacture) throughout the entire game.

In times of ebbing income, when you need some missiles but can't afford an expensive batch of Parallax Torpedoes or other high-powered missiles, it's always good to know that you can fall back on X-Winders. You can order them any time and have them delivered within a day or so.

Tip **X-Winders aren't as bad as you might think, especially early in the game, where every little bit helps. Nevertheless, when the opportunity arises, start updating your ships by removing the X-Winders and replacing them with something a bit faster and more powerful.**

TIP-O-MATIC

MISSILE AND MISSILE LAUNCHER STATS

Table 5.3 shows the particulars of all the missile launchers in the game. The following statistics are shown for each:

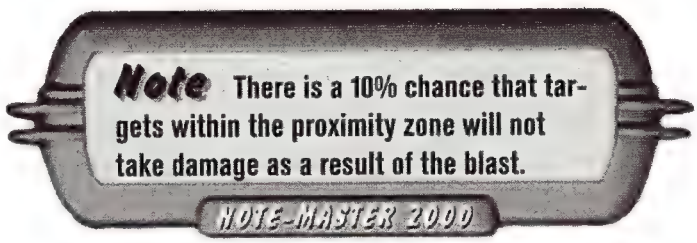
- **Cost:** The purchase or manufacture price of the launcher
- **Mfg. Time:** The amount of time required to build one launcher, expressed in technician-hours
- **Rounds:** The number of missiles the launcher holds
- **Rate of Fire:** The amount of time between shots fired from a single launcher (in seconds)
- **Hit Points:** The amount of combat damage the launcher can take before it is destroyed (if a launcher is destroyed, all the missiles still mounted there are lost as well)

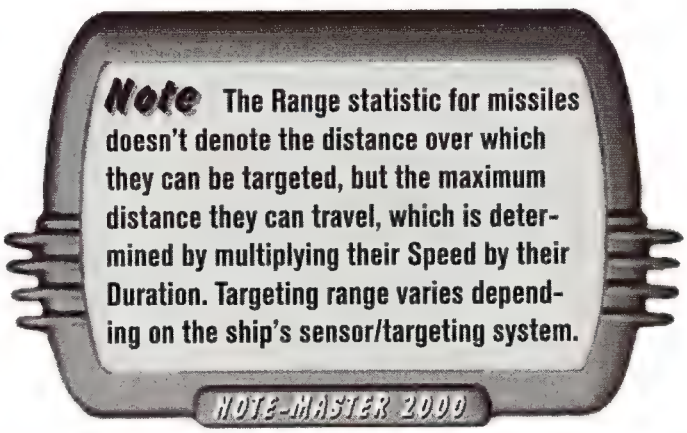
Table 5.3: Missile launcher statistics

Missile Launcher	Cost ($)	Mfg. Time (tech/hrs)	Rounds	Rate of Fire (sec)	Hit Points
Doppelganger Missile	160,000	400	1	–	25
Elerium Torpedo	160,000	300	4	1	25
Enveloping Fusion Torpedo	242,000	600	3	3	25
Fusion Missile	210,000	600	2	4	25
Nova Bomb	250,000	400	1	–	40
Parallax Torpedo	160,000	300	3	3	25
Passive Cloaking Torpedo	165,000	300	2	3	25
Permeator Missile	170,000	300	3	2	25
Sidestep Missile	155,000	325	4	2	25
X-Winder Missile	16,000	N/A	5	4	25

Table 5.4 shows the specifications for each missile. The statistics shown are:

- **Targeting System:** The minimum targeting system required by the weapon
- **Cost:** The purchase or manufacture price of the missile
- **Mfg. Time:** The amount of time required to build one missile, expressed in technician-hours
- **Impact Damage:** The amount of damage each shot inflicts when it impacts a target
- **Proximity Damage:** The amount of peripheral damage inflicted on targets within a .25 kilometer radius when the weapon hits its target or is destroyed
- **Speed:** The speed of the missile (in kilometers per second)
- **Duration:** The amount of time the missile remains in flight (in seconds)
- **Range:** The maximum range of the weapon in kilometers





- **Hit Points:** The amount of combat damage the missile can take before it is destroyed.

Table 5.4: Missile statistics

Missile	Targeting System*	Cost ($)	Mfg. Time (tech-hrs)	Impact Damage	Proximity Damage	Speed (km/s)	Duration (sec)	Range (km)	Hit Points
Doppelganger Missile	3	95,000	800	N/A	300	.5	30	15	10
Elerium Torpedo	1	10,000	200	400	250	1.1	10	11	10
Enveloping Fusion Torpedo	1	28,000	700	500**	300	1.05	14	14.7	10
Fusion Missile	1	32,000	1,100	3,000	950	.35	15	5.25	50
Nova Bomb	3	750,000	12,500	0***	300	Special	Special	Special	300
Parallax Torpedo	1	22,000	600	400	250	2	12	24	10
Passive Cloaking Torpedo	2	21,000	350	350	200	1.65	15	24.75	10
Permeator Missile	2	14,000	350	550	200	1.15	10	11.5	10
Sidestep Missile	2	16,000	450	450	275	1.45	12	17.4	10
X-Winder Missile	1	9,000	N/A	300	200	1	10	10	10

* 1=Standard; 2=Emissions; 3=AATS
** Damage applied equally to fore and aft shields
*** Targets and destroys the nearest star

EQUIPMENT

Interceptor allows you a great deal of latitude in ship design. While most other games only allow you to swap out a few weapons here and there, *Interceptor* gives you control of just about every ship system, right down to the engines and armor.

The following sections describe all the non-weapon interceptor equipment to which you have access throughout the game.

ARMOR

Although X-COM interceptor hulls are built from state-of-the-art materials and are extremely strong, they are still no match for a continuous barrage of alien weapons fire. A variety of armor types are available to augment your ships' structural integrity.

Tip If you feel like armor is slowing you down and you're considering sending your ships out without armor, *don't*! Ships die very quickly when they don't have armor. Being a little slow is better than being a lot dead!

TIP-O-MATIC

These plates are installed on modular attachment points that are integrated into all interceptor hulls. While the extra mass of the armor affects speed and performance, this extra layer of physical protection can often mean the difference between life and death.

Note **Unlike a ship's other systems, armor is not repaired during combat. If the ship has any armor remaining after combat, it is repaired back at the base. Armor is considered destroyed only after both the front and rear armor has been eliminated.**

NOTE-MASTER 2000

STANDARD ARMOR

Standard Armor is available from the beginning of the game, and comes standard on all stock interceptors until you research Tri-Titanium Armor. Heavy and bulky, this protective plating has a noticeable effect on ship performance. However, it's not something you want to do without.

Keep a close watch on the armor on all your ships. If any ship's armor is destroyed in combat, make sure you replace it before sending the ship back into the fray if at all possible.

TRI-TITANIUM ARMOR

This armor, which becomes available after you research a Wraith saucer and two of its related technologies, is a significant step up from Standard Armor protection-wise. Despite the fact that it is more bulky and has a tendency to affect ship performance slightly more drastically than Standard Armor, you should consider upgrading all your existing ships to Tri-Titanium as soon as it's available.

TRANS-DERMAL ARMOR

Trans-Dermal Armor is the most advanced physical protection available for your ships. It provides the highest protection rating of any armor type—but it's also the lightest armor money can buy. That means the best of both worlds—lots of protection, little impact on performance. Highly recommended.

ARMOR STATISTICS

Table 5.5 shows the following specifics for each armor type:

- **Cost:** The purchase or manufacture price
- **Mfg. Time:** The amount of time required to build the armor, expressed in technician-hours
- **Protection:** The amount of damage protection provided by the armor; the full number of hit points listed is applied both forward and aft

> **Note** As each new armor type becomes available, it is automatically included as part of your interceptors' stock configurations. (See "Stock Interceptors," later in this chapter, for details.)
>
> NOTE-MASTER 2000

> **Note** Unlike armor hit points, the hit points for your ships' hulls are the total number of hit points for the hull as a whole.
>
> NOTE-MASTER 2000

Table 5.5: Armor statistics

Armor Type	Cost ($)	Mfg. Time (tech-hrs)	Protection *
Standard Armor	25,000	N/A	250
Tri-Titanium Armor	50,000	650	375
Trans-Dermal Armor	85,000	800	425

* Listed amount is applied both fore and aft.

SHIELDS

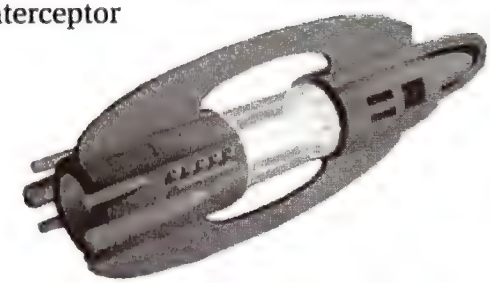
Shields are your first line of protection against all damage, be it collision damage or enemy weapons fire. Next to your weapons, shields are far and away the most important system on your ship.

As with just about all the equipment and weapons in *Interceptor*, shields get better as new technologies are discovered. The following sections contain descriptions of each of the three shield systems available in the game.

DEFLECTOR SHIELDS

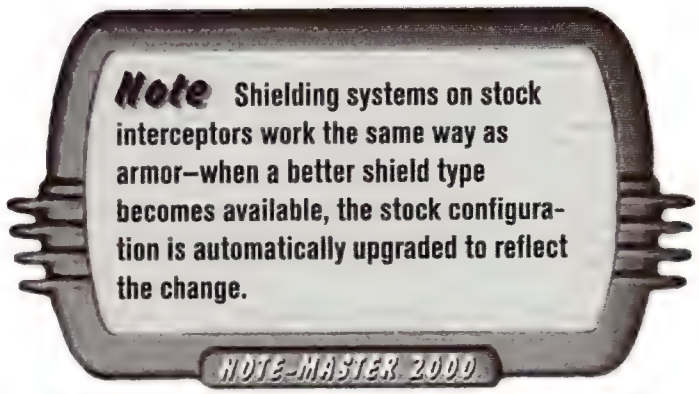
Deflector Shields are the most basic shielding available. That's not to minimize their importance: If you've flown even one combat mission, you probably have some idea of just how fast you'd be vaporized without this layer of electromagnetic

protection. Deflector Shields are standard on a stock interceptor until something better comes along.



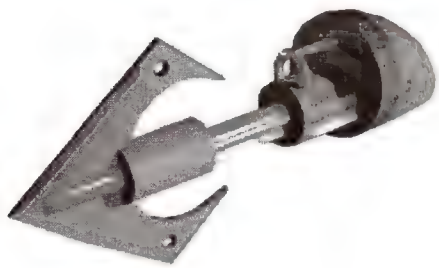
ELECTROPLASMIC SHIELDS

Electroplasmic Shields are the intermediate level of shield system available to you. Anything that puts an extra bit of protection between you and the bad guys is definitely a good thing—so when a new shield system comes along, you should definitely take advantage of it. As always, the new system will come standard on all the new stock interceptors you purchase, but you'll have to upgrade your existing ships on your own. (This is highly recommended, by the way.)



TRANS-DIMENSIONAL SHIELDS

This is the third—and best—shield system available for X-COM fighters. (The aliens have a fourth—and even better—system, but you don't have access to it.) Same advice here as before: You must upgrade your fleet's equipment to the current state of the art if you want the best possible shot at survival.



If the added damage protection isn't enough to sway you to this new shielding system, how about this: psionic protection. Trans-Dimensional Shields reduce Psi Blaster effectiveness by 50%; they are the only shields that provide your pilots with peace of mind (so to speak).

SHIELD STATISTICS

Table 5.6 lists the following particulars for each shield type:

- **Cost:** The purchase or manufacture price
- **Mfg. Time:** The amount of time required to build the shield generator, expressed in technician-hours
- **Protection:** The amount of damage protection provided by the shields (when they are at full charge); the full amount of hit points listed is applied both

forward and aft by default (you can re-balance the power at your discretion so that the shields provide more forward or rear protection)

- **Hit Points:** The amount of combat damage the shield generator itself can sustain before it is destroyed

Table 5.6: Shield statistics

Shield Type	Cost ($)	Mfg. Time (tech-hrs)	Protection*	Hit Points
Deflector Shield	75,000	N/A	300	50
Electroplasmic Shield	90,000	1,000	400	75
Trans-Dimensional Shield	125,000	1,400	500	100

* Listed amount is applied both fore and aft.

SENSOR/TARGETING SYSTEMS

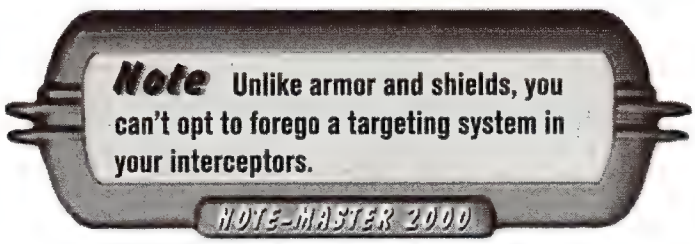
Interceptor also allows you the freedom to choose your ships' sensor/targeting systems. The sensor component of these systems determines your interceptors' detection range on the CSD—the more advanced the system, the longer the range.

The targeting component deals primarily with your projectile targeting capabilities. With one notable exception, all beam weapons are point-and-shoot weapons—if the target (or its lead reticle) is in your sights, the beam hits. Missiles, on the other hand, require you to obtain a target lock before you can hope for a reasonable chance to score a hit. As the targeting systems become more advanced, the size of the missile-lock detection area—the area of the HUD in which your target must be for you to obtain a lock—increases, and missile-lock time *decreases*. Also, the more advanced the system, the longer its effective lock range.

As with so many things, improvements in technology lead to improvements in sensor/targeting systems. All three available systems are described here.

STANDARD TARGETING SYSTEM

The most basic sensor and targeting system available, the Standard Targeting System is just what you'd expect: it's the lowest rated in all categories. Even so, it's all you've got until something better comes along. Live with it as long as you have to, then upgrade—fast. Adding to its drawbacks is the fact that ships equipped with this system are severely limited in what missiles they can use.



EMISSIONS TARGETING SYSTEM

Of all the systems you'll want to upgrade as the game progresses, sensor/targeting systems are at the top of the list. Besides the added scanning range you get on the CSD with more advanced systems, you'll notice the shorter missile-lock time and the larger sweet spot in which target lock can be achieved. Locking missiles is a *lot* easier as targeting systems become more sophisticated.

Besides its other advantages, upgrading to the Emissions Targeting System from its Standard predecessor gives you the opportunity to use a variety of new missile types previously unavailable to you due to targeting system limitations. (See Table 5.4 for details.)

ADVANCED AUTONOMOUS TARGETING SYSTEM (AATS)

Here's the targeting system you've been waiting for. For starters, the AATS allows you to use any type of missile in the game—a necessity before you embark on the final mission. In addition, the missile lock is superfast and much more forgiving than its predecessors. Once you achieve a lock, as long as the target remains more or less in front of you, the lock is maintained.

The advanced tracking capabilities of this targeting system allow you to install Tracking Tracer Cannons on your ships as well. The only beam weapons that require a specific targeting system in order to function, Tracking Tracer Cannons automatically track your target's movements, keeping the beam trained on them until they drop out of your (forward) line of sight.

SENSOR/TARGETING SYSTEM STATISTICS

Table 5.7 gives all the particulars of each sensor/targeting system, including the following:

- **Cost:** The purchase or manufacture price
- **Mfg. Time:** The amount of time required to build the system, expressed in technician-hours
- **Missile-Lock Time:** The number of seconds the target must remain inside the lock-detection area before a positive lock is achieved
- **Missile-Lock Range:** The maximum range at which missile lock can be achieved
- **CSD Range:** The sensor range (diameter of the sensor detection circle) on the CSD in light-years (LY)

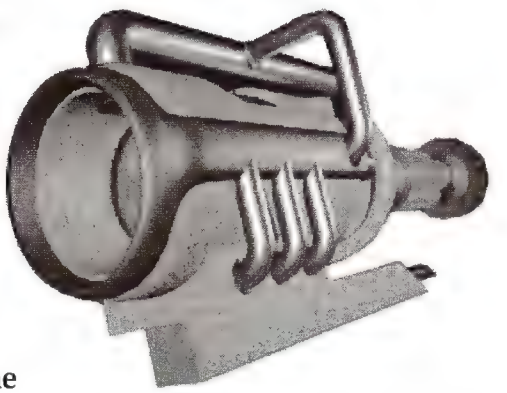
- **Hit Points:** The amount of combat damage the system itself can sustain before it is destroyed

Table 5.7: Sensor/targeting systems statistics

Sensor/Targeting System	Cost ($)	Mfg. Time (tech-hrs)	Missile-Lock Time (s)	Missile-Lock Range (km)	CSD Range (LY)	Hit Points
Standard Targeting System	65,000	N/A	2.5	3	.34	60
Emissions Targeting System	85,000	650	2	4	.67	75
Advanced Autonomous Targeting System (AATS)	100,000	750	1.5	5	1	90

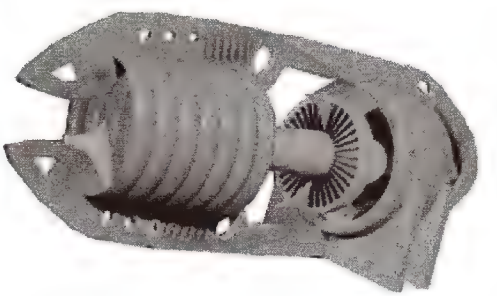
ENGINES

Another important system in the ship customization scheme is the engine. A total of three engines, each progressively more powerful, become available over the course of the game. In addition to the obvious advantage of increased speed and power in combat, advanced engines also increase your ships' effective hyperspace range. The more advanced the engine, the longer the ship can remain in flight away from the base. All three engines are briefly described here.



CONVERSION DRIVE

This drive system is the most powerful available on Earth at the start of the game. Even so, it was designed specifically to drive small, light fighter craft through normal space, and provide what was presumed to be adequate hyperspace endurance. At the start of the game these engines are more than adequate—a Lightning II gets by just fine with Conversion Drive. It is not until you start building heavier craft or requiring ships to travel through hyperspace for more than 24 hours at a time that an engine upgrade becomes imperative.



GRAVITY/INDUCTION DRIVE

Gravity/Induction Drive is a definite step up in both real- and hyperspace performance. This alien engine increases your interceptors' hyperspace endurance by 50% and maxes out the battle speed of Lightning IIs. More importantly, Gravity/Induction engines provide sufficient thrust to drive the heavier

Firestar interceptors, which perform inadequately when equipped with standard Conversion Drive systems.

GRAVITON PULSE DRIVE

This is the ultimate achievement in fighter drive technology. Once again based on alien technology, the Graviton Pulse Drive is the *only* acceptable engine choice for Super Avenger interceptors. Neither of the other engine types provides even a fraction of the combat thrust required by these massive ships. This drive system is also great for Firestars. Don't bother installing Graviton Pulse Drive on a Lightning II, though. It's a waste of money, since Gravity/Induction Drive provides adequate thrust for the smallest of the interceptors.

Tip **Near the end of the game, Graviton Pulse Drive is important not primarily for its combat performance, but for its added hyperspace range. There are two ways to take the battle into alien territory: building a line of bases that allow you to launch short-range attacks or fielding a fleet of ships with long-range hyperspace capabilities. The latter method is the more economical of the two.**

TIP-O-MATIC

ENGINE STATISTICS

Table 5.8 lists the following statistics for each engine type:

- **Cost:** The purchase or manufacture price
- **Mfg. Time:** The amount of time required to build the engine, expressed in technician-hours
- **Max. Thrust:** The engine's maximum thrust (used to determine the speed of the craft based on its mass, as described later in this chapter)
- **Hyper. Range:** The number of hours a ship equipped with this drive system can remain in space without refueling
- **Hit Points:** The amount of combat damage the engine can sustain before it is destroyed

Table 5.8: Engine statistics

Engine	Cost ($)	Mfg. Time (tech-hrs)	Max Thrust	Hyper. Range (hrs)	Hit Points
Conversion Drive	80,000	N/A	75	24	100
Gravity/Induction Drive	145,000	1400	175	36	150
Graviton Pulse Drive	185,000	1700	300	48	200

SPECIAL SYSTEMS

The final group of gadgets available for your ships covers a wide variety of devices known collectively as special systems. Primarily defensive in nature, this category includes equipment such as invisibility screens, electromagnetic countermeasure generators, and special thrust systems. As a general rule, these systems significantly affect the amount of power you have available for beam weapons and engine power.

CLOAKING DEVICE

The Cloaking Device is an excellent combat tool, especially when you're attacking bases or other large alien installations. While cloaked, you are hidden from sight and sensors. You can thus sneak up on the enemy unawares and cut loose with your full weapons arsenal. The only catch is that the power requirements and the reflectivity of the cloaking field prevent you from firing weapons while cloaked. This means that when you're ready to let loose your volley, you must first reveal your presence to the enemy.

> **Tip** When you get a missile-lock warning and you have a Cloaking Device installed, try toggling the cloak command repeatedly. Every time you activate the cloak, there is a good chance the missiles currently tracking you will lose their lock.
>
> TIP-O-MATIC

Though it should be considered a luxury, the Cloaking Device is without a doubt quite useful. It is not infallible, however, and its defensive advantage should never be counted on to be absolute. (See Chapter 7 for details on the operation and limitations of Cloaking Devices.)

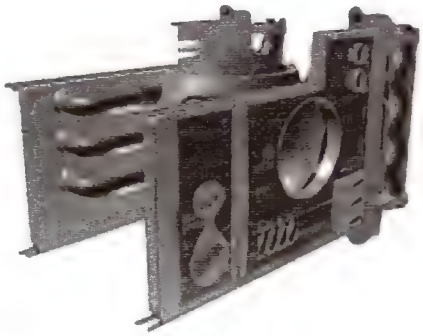
ECM PODS

Don't confuse these systems with their 20th century electronic predecessors—electromagnetic countermeasures

(ECMs) are designed to foil the most sophisticated missile weapons you'll encounter in 21st century deep-space combat.

Both basic ECM Pods and their Advanced counterparts are designed to scramble the guidance systems of incoming missiles. Both do an adequate job, with a slight edge going to the Advanced system. (Details on the operation of ECM can be found in Chapter 7.) The better the system, the more often it will be successful in deflecting the missiles aimed at you. ECM systems also increase the amount of time it takes an opponent to lock a missile on you.

SHIP DAMAGE CONTROL COMPUTER



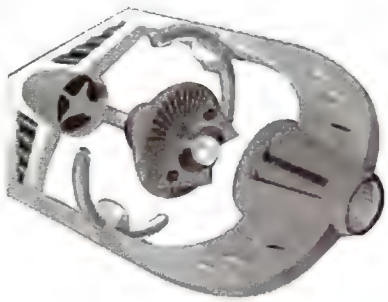
Most of the systems on your interceptors are self-repairing. During combat, damaged systems regenerate at the rate of two hit points per second. If you manage to remain clear of enemy fire long enough, your ship will essentially take care of itself. Unfortunately, in practice, you don't usually have nearly as much time as you'd like to allow your ship to repair itself.

That's where the Ship Damage Control Computer comes in. When this device is installed on your ship, all systems are repaired at double their normal rate. This adds a bit more longevity to your ships when they engage in drawn-out battles.

> **Tip** **Speaking of long battles, make sure you have a Ship Damage Control Computer on each of the ships you take into the final battle of the game.**
>
> TIP-O-MATIC

TRACTOR BEAM

The principle behind the Tractor Beams in *Interceptor* is pretty simple: They are simply giant electromagnetic tow ropes. Their function is to latch onto disabled ships so that you can tow them out of the battle area. This may seem like a waste of time and effort, since you can also capture ships by simply disabling them and leaving the battlefield after victory has been achieved. That's a fine—and, indeed, recommended—strategy in the early stages of the game.



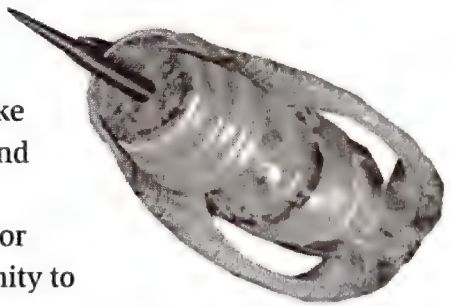
Later in the game, however, you might find yourself in a situation like this: you need to grab an alien Phantasm saucer to proceed in your research. You encounter one in battle, but you can't spare enough ships to win a decisive victory. If your ship has a Tractor Beam you can jump in, disable and snare a Phantasm, and hyperspace out without risking your life for an undue period of time. You don't get all the glory and spoils of a total victory, but you *do* come away with your captive Phantasm.

> **Tip** Make sure you disable your target before you attempt to tow it with a Tractor Beam. Also, make sure your ship is of sufficient mass to tow the target. If a target retains motive power or is too massive, you can cause serious damage to your ship's engines, and you might end up disabled yourself!
>
> TIP-O-MATIC

In summary, Tractor Beams are important tools in the latter portion of the game, but you can probably do without them early on.

VECTOR CONTROL THRUSTERS

At first, your alien adversaries tend to move much like your own ships. This is especially true of the Wraith saucers. But as alien technology progresses, you'll notice that alien ships have the annoying tendency to make strange, abrupt lateral or vertical movements that you—and your missiles in flight—have trouble tracking.



The devices behind the aliens' mobility are their Vector Control Thrusters. Luckily for you, you have the opportunity to reproduce this device (once you've completed the proper research, that is). When installed on your ship, this system allows you to propel your ship horizontally or vertically (or a combination of the two) at a static thrust of 35. (See the thrust statistics for engines in Table 5.8 if you want a basis for comparison.) When combined with your ship's normal propulsion, this produces some truly awesome maneuvers capable of foiling both your opponents and their missiles.

> **Note** Unlike normal engines, Vector Control Thrusters are not affected by the mass of your ship. No matter how heavy or light you are, the Thrusters' effects are always the same.
>
> NOTE-MASTER 2000

SPECIAL SYSTEMS STATISTICS

Table 5.9 lists the following statistics for the special systems:

- **Cost:** The purchase or manufacture price
- **Mfg. Time:** The amount of time required to build the engine, expressed in technician-hours
- **Range:** For ECM Pods, effective range in kilometers
- **% Chance of Success:** For ECM Pods, the percentage chance of the system disrupting an enemy missile's lock
- **Hit Points:** The amount of combat damage the system can sustain before it is destroyed

Table 5.9: Special systems statistics

Special System	Cost ($)	Mfg. Time (tech-hrs)	Range (km)	% Chance of Success*	Hit Points
Advanced ECM Pod	75,000	800	.5	25	50
Cloaking Device	100,000	1500	N/A	N/A	N/A
ECM Pod	45,000	600	.25	10	40
Ship Damage Control Computer	85,000	500	N/A	N/A	100

CUSTOMIZING INTERCEPTORS

Now that you are familiar with all the components that can be added to your interceptor fleet, it's time to get down to the business of actually putting the ships together. You could almost go through the entire game without ever once adding or replacing ship equipment and weapons—but why in the Frontier would you want to do something like that? One of *Interceptor*'s defining features is that it gives you the ability to customize your ships using technology you have accumulated and studied over the course of the game. Not to avail yourself of this opportunity only makes the game more difficult. Besides, building your ships and testing your designs is part of the fun!

The remainder of this chapter looks at the principles of interceptor design and shows you a few designs that tend to work nicely in specific situations.

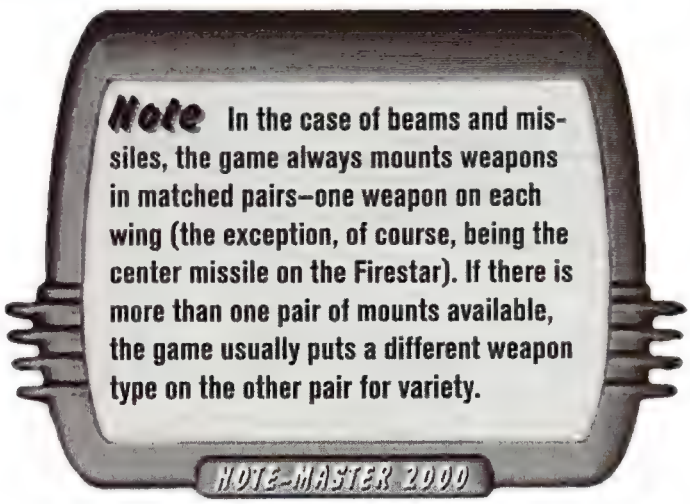
STOCK INTERCEPTORS

Before we launch into a discussion of how to reconfigure your interceptors once they get to your base, let's take a look at how they're equipped when they arrive brand spanking new, straight off the outpost's showroom floor.

Every interceptor has what is known as a "stock" configuration. These are the interceptors that appear by default on your purchase (or manufacture) menu as "factory-loaded" ships. The stock configuration is basically the game's best guess at the ship configuration that best suits your current needs. As your level of technology increases, the configurations change to keep up with the times.

A factory-loaded stock interceptor includes the following:

- The hull (of course)
- Armor (best currently available)
- A shield generator (best currently available)
- Engines (best currently available)
- A beam weapon on each beam hardpoint (best currently available)
- A missile weapon on each missile hardpoint (best currently available)



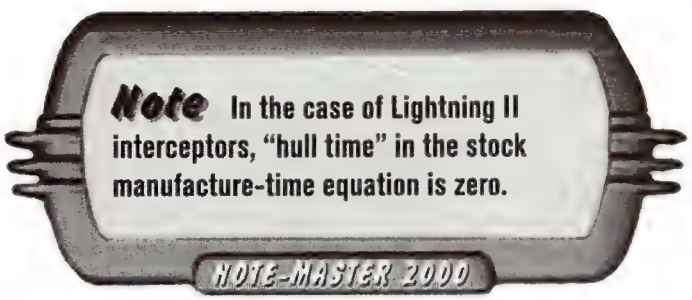
You can view the current stock interceptor configuration by going to the Equip Ship screen, clicking the Edit Custom Ship Configuration button, and highlighting the ship type you want to view.

Obviously, as stock configurations change and improve, their prices increase to reflect the increased equipment costs. The following equation determines a stock interceptor's purchase/manufacture price:

```
Stock Cost=Hull Cost+((armor+shields+engine+sensor+beams+missiles)*.9)
```

As you can see, you get a discount for purchasing the equipment options as a package. It's just like buying a new car, really—except there's no haggling involved.

Manufacture time also varies depending on the stock interceptor's



configuration. Even stock Lightning IIs are affected by manufacture-time changes—the hull itself is an in-stock item, but the weapons and systems attached might not be items that are available "off the rack." The manufacture time of a stock ship is determined as follows:

```
Mfg. Time=(hull time+armor+shields+engine+sensor+beams+missiles)*.8
```

Once again, you get a "discount" because you're buying in bulk.

WHAT IS THE "BEST CURRENTLY AVAILABLE"?

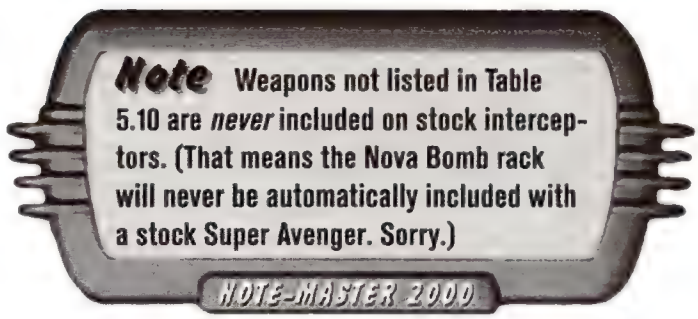
Good question. Once your technology reaches a moderate to high level, you have access to a great many weapons and systems. How does the game judge which is the best of the lot when putting together a stock ship configuration?

Table 5.10 shows all the categories of items that go into a stock interceptor configuration, and lists the systems in order from the best to the worst (from the game's stock-interceptor-design point of view).

Table 5.10: Order of system preference for stock interceptor configuration

Armor	Shield	Engine	Sensor/ Targeting	Beam Weapon	Missile Weapon*
Trans-Dermal	Trans-Dimensional	Graviton Pulse	AATS	Phase Cannon	Enveloping Fusion Torpedo
Tri-Titanium	Electroplasmic	Gravity/ Induction	Emissions Targeting	Tracking Tracer Cannon	Passive Cloaking Torpedo
Standard	Deflector	Conversion	Standard	Tracer Cannon	Sidestep Missile
–	–	–	–	Tachyon Pulser**	Doppelganger Missile***
–	–	–	–	Gatling Laser	Parallax Torpedo
–	–	–	–	Plasma Pulse Cannon	Permeator Missile
–	–	–	–	Heavy Laser	Fusion Missile***
–	–	–	–	Laser Cannon	Elerium Torpedo
–	–	–	–	–	X-Winder Missile

*All missile systems on stock interceptors come complete with a full load of missiles.
** No ship is ever equipped exclusively with this beam weapon type.
*** No ship is ever equipped exclusively with this missile weapon type.



SAVING ALTERNATE CONFIGURATIONS

As you can see, the dynamic configuration system the game uses to determine an interceptor's stock configuration is pretty straightforward. It is relatively effective when it comes to keeping up with the times, but not particularly inventive in its choices. What that means to you is that the stock ships you order might not come equipped

with the weapons you want or deem most effective given the current state of Frontier affairs in your game.

> **Tip** Creating custom configurations is also a great way to save money, either by cutting unwanted items from the stock design or by adding the special systems you tend to use frequently. (By adding special systems to a customized stock design, you get them at the discounted package rate!)
>
> TIP-O-MATIC

Fortunately, you aren't forced to stick with the configurations the game selects. By clicking the Edit Custom Ship Configuration button on the Equip Ship screen, you can access the current stock configurations at any time during the game, and create custom configurations (based on your current technology level) that suit your needs and live up to your exacting design standards.

To create a custom configuration, select one of the stock ships listed in the menu. The ship is displayed in the Ship View area, and all of the hardpoints reflect the weapons and systems assigned to the current stock configuration for the ship type displayed.

You create a custom configuration in the same way you would add equipment and weapons to a ship you own. In this case, the available equipment and weapons displayed to the right of the Ship View reflect all the weapons you have the technology to build at the moment (not necessarily the weapons you currently have in stock in your Cargo Modules). Add systems to the ship's hardpoints as described in the manual.

Once you have completed your custom ship, click the Save Current Configuration icon. You are prompted to name your design. (Use something descriptive so that you can remember the characteristics of the ship just by reading its name.) Once you have done so, the ship configuration is saved and appears in the Stock Configurations list. Now, the next time you go to the Equipment and Personnel screen, your custom configuration is listed as one available for purchase (or manufacture) at any time. (See Figure 5.1.)

> **Note** Unlike stock configurations, the custom designs you create do not change as technology progresses. They retain the configuration you selected until you go in and change them manually.
>
> NOTE-MASTER 2000

Figure 5.1

The manufacturing menu, reflecting available custom ship configurations

THE DOWN AND DIRTY GUIDE TO INTERCEPTOR DESIGN

One of the many reasons that *Interceptor* is never quite the same game twice is that there are subtle (and not-so-subtle) differences in your spacecraft's combat performance depending on the type and loadout of the interceptor you fly. An attack on an alien base will play much differently from the cockpit of a Firestar equipped with X-Winders than it will if you're at the controls of a Super Avenger with a couple of racks of Fusion Missiles.

The next few sections give you an overview of the various aspects of space fighter design.

THE BASICS

The concepts involved in equipping interceptors are pretty simple. Between the game manual and the Screen Tour in the game itself, you should already understand the mechanics of adding and removing weapons and equipment. (If not, perhaps you should go back to the documentation and refresh your memory before you read any further.)

In a nutshell, all your weapons and equipment are mounted on modular hardpoints on the interceptor, beneath the skin of the outer hull. Each interceptor model has a varying number of beam, missile, and special systems hardpoints (as shown in Figure 5.2). There are also hardpoints specifically slated for engines, shields, targeting systems, and armor; every interceptor, regardless of model, has one hardpoint for each of these systems. The available hardpoints on an interceptor are open black circles on the Equip Ship screen, while hardpoints that aren't available on the displayed model are closed off.

Figure 5.2

The Equip Ship screen

As a general rule, weapon mounts are symmetrical, one on each wing. (The exceptions to this rule are the centerline missile hardpoint on the Firestar and the Nova Bomb hardpoint on the Super Avenger.) On the equipment side—were you to number the hardpoints starting at the bottom right and moving clockwise—the armor, engine, sensor/targeting system, and shield hardpoints are four, five, six, and seven (respectively). The remaining equipment hardpoints can be used for special equipment.

DESIGN TO SUIT YOUR SITUATION

Your choice of weapons and systems should be primarily driven by need. Most of your interceptors should be general-purpose craft that are equally capable of handling simple dogfights and attacks on small to moderate-size alien installations. Firestars armed with a variety of medium-powered missiles and two beam-weapon types—one pair for rapid fire, the other for overall punch—work best in this catchall role. You'll also want to keep a few specialty craft around—a few Lightnings for dogfighting and escort duty, and a few Super Avengers to take care of the heavy work. If you maintain this sort of varied fleet, you should be able to handle any situation the aliens throw at you.

Tip **Use Lightnings or Firestars as escorts for the larger, more cumbersome Super Avengers during attack missions. The varied mix of fighters tends to work well, as the abilities of each cover for the shortcomings of the other vessels in the group.**

TIP-O-MATIC

The early sections of this chapter provide all the information you'll need to choose the right weapons for the right situations. As far as special systems go, you'll have to be the judge of which ones work best for you. Many special systems, like the Tractor Beam, could be deemed essential, while others—like the Cloaking Device—are almost novelty items unless you are practiced in the tactics needed to use them properly in combat.

BITE VERSUS FLIGHT (MASS ISSUES)

The one thing that you *must* consider when designing your ships is the effect the masses of the weapons and other systems have on the ship's overall performance. After all, what good is it to have a Firestar that is just oozing firepower if the ship can do nothing but sit still when it gets to the combat area?

A ship's performance is based on its engine thrust (shown in Table 5.8) and the overall mass of the ship. Generally speaking, a massive ship with weak engines performs badly, while a light ship with powerful engines is nimble and quick.

The total mass of a ship is determined by the equation

```
Total Mass=Base Mass+Armor+Loadout
```

where Base Mass is the mass of the ship's hull, Armor is the mass of the ship's armor, and Loadout is the sum of the masses of all the weapons and equipment mounted on the ship.

Tables 5.11 through 5.14 show the individual masses that go into an interceptor's total mass. Items not listed in these tables are considered to be of negligible mass, and do not affect the total.

Table 5.11: Interceptor hull (base) mass

Interceptor Hull Type	Mass (kg)
Lightning II	6,700
Firestar	12,700
Super Avenger	22,700

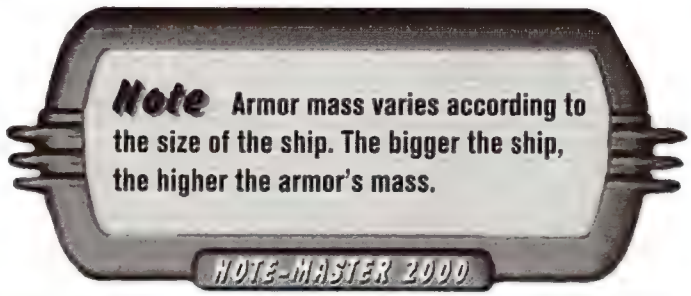


Table 5.12: Armor mass by armor and interceptor type

Armor Type	Mass (kg)		
	Lightning II	Firestar	Super Avenger
Standard	200	300	400
Tri-Titanium	350	450	550
Trans-Dermal	150	250	350

Table 5.13: Missile masses

Missile/Torpedo Type	Mass (kg)*
Doppelganger	1,145
Elerium	70
Enveloping Fusion	670
Fusion	940
Nova Bomb	11,000
Parallax	210
Passive Cloaking	440
Permeator	370
Sidestep	230
X-Winder	85

* Missile mass is applied for *each missile*. If a rack holds four missiles, the mass is applied four times.

Note The mass of the missile launchers themselves (except for the Nova Bomb Launcher) are negligible, as are all beam-weapon masses.

NOTE-MASTER 2000

Table 5.14: Masses of standard and special systems

System	Mass (kg)
Cloaking Device	550
ECM Pod (either)	200
Nova Bomb Launcher	100
Shield Generator (any)	250
Ship Damage Control Computer	100
Tractor Beam	300
Vector Control Thrusters	450

By determining the total mass of your interceptor and comparing that to its engine thrust, you can formulate a rough estimate of the ship's speed and maneuvering potential. There are a lot of equations involved in the game's calculation of the actual speed and maneuverability, and the specifics aren't really going to help you all that much anyway. Suffice it to say that lighter ships always perform better than heavier ones, and the more thrust your engines provide, the better your combat performance.

Note Mass and engine type also determine your ships' speed of travel through hyperspace (on the CSD map). The same rule applies: Massive ships and primitive engines mean slower speeds.

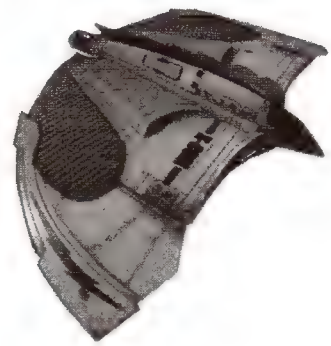
NOTE-MASTER 2000

SOME WINNING CUSTOM CONFIGURATIONS

Use this final section as a jumping-off point for your own ship design ideas. The following are three ship configurations that are particularly useful in specific game situations. Try them out. If you like them, use them. If not...well, that's why *Interceptor* allows you the freedom to design your own configurations.

THE "DOGFIGHTER"

This is a nimble yet powerful interceptor that works well as a mid-game dogfighter. When taking this one into combat, remember that there's safety in numbers—Lightning IIs are too puny to last long in combat if they're the only thing the bad guys are shooting at!



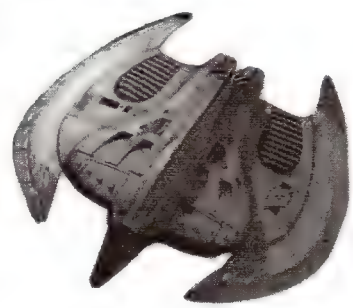
- Lightning II hull
- Gravity/Induction Drive
- Trans-Dermal Armor
- Emissions Targeting System
- Electroplasmic Shields
- 2 Gatling Lasers
- 2 Elerium Torpedo Launchers

Tip **There is *never* any reason to equip a Lightning II with Graviton Pulse Drive. It can achieve its maximum speed (around 600) handily with the cheaper Gravity/Induction Drive.**

TIP-O-MATIC

THE "ESCORT"

As your offensive missions against big targets escalate in the game, you'll find you're using Super Avengers more and more. Trouble is, alien bases are more often than not protected by a swarm of fighters in addition to the formidable guns on the base proper. Against large stationary targets, Super Avengers rule. In a dogfight with quick-moving alien fighters, though—that's a different story.



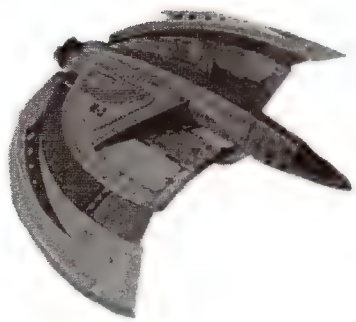
This design, based on a Firestar hull, not only has the nimbleness required for dogfighting and covering your Super Avengers' butts, it also has some big-gun firepower of its own in case you need to pump a few extra shots into the base.

- Firestar hull
- Gravity/Induction Drive
- Trans-Dermal Armor
- Emissions Targeting System
- Electroplasmic Shields
- 2 Gatling Lasers
- 2 Phase Cannons
- 2 Permeator Missile Launchers
- 1 Fusion Missile Launcher

> **Tip** Unless you have a specific reason to do otherwise, you should always mount your beam weapons in pairs on opposite wings. This allows you to take advantage of firing the weapons both linked and in full-guns mode on Firestars and Super Avengers.
>
> TIP-O-MATIC

THE "ULTIMATE FIGHTER"

The final mission of the game involves a two-pronged assault on the alien universe, starting with a pitched dogfight outside a black hole and ending with the complete and utter destruction of the aliens' universe. For that kind of job, you need a special kind of fighter. This cherried-out Super Avenger is just what you need to get the job done. (Remember, you need at least one Super Avenger equipped with a Nova Bomb in the final group in order to launch the mission in the first place.)



- Super Avenger hull
- Graviton Pulse Drive
- Trans-Dermal Armor
- AATS
- Trans-Dimensional Shields
- 2 Phase Cannons
- 2 Tracking Tracer Cannons

> **Multiplayer Tip** This ship configuration—minus the Nova Bomb, of course—tends to survive well in a deathmatch game.
>
> MULTIPLAYER TIP-O-MATIC

- 2 Passive Cloaking Torpedo Launchers
- 2 Permeator Missile Launchers
- 1 Nova Bomb Launcher
- Cloaking Device
- Ship Damage Control Computer
- Vector Control Thrusters

Chapter 6

THE ALIENS: WHO THEY ARE AND WHAT THEY'RE UP TO

THE TIME HAS COME to meet the enemy. In order to effectively combat the bad guys, you need to have a working knowledge of their goals, motivations, and abilities. Armed with this information, you can make informed tactical decisions throughout the game and develop defensive and offensive strategies appropriate to every situation.

The first part of this chapter discusses the strategic portion of the game—the alien goals and objectives that determine their activities and expansion in the Frontier. The remainder of the chapter delves into the combat portion of the game, discussing the characteristics and abilities of various alien species, all the alien spacecraft, and every large alien facility.

ALIEN STRATEGIC OPERATIONS

Interceptor contains two complex, interrelated A.I. systems. The most obvious one is the combat A.I.—the algorithms that define the behavior and capabilities of the alien spacecraft in combat. This is something that's very obvious and in your face every time you jump into the cockpit. This is discussed later in the chapter.

The second, and more subtle, A.I. system is the one used by the aliens to determine their general course of action in the Frontier. One of the unique features of this game is that the aliens play by (more or less) the same rules as you. They follow the same basic economic model, they research new technologies (after a fashion), and they respond dynamically to the enemy's (your) actions—or lack thereof. Knowing the alien agenda is extremely helpful in planning your overall strategy for the campaign.

ALIEN PRIORITIES

As X-COM's commander, you have an overriding goal, a cornerstone upon which you build your game strategy. Your primary goal is to hold the aliens at bay long enough to discover the existence and location of the Doomsday Weapon and destroy it before it can be launched against Earth. This is what drives you and acts as the nexus for all your actions throughout the campaign.

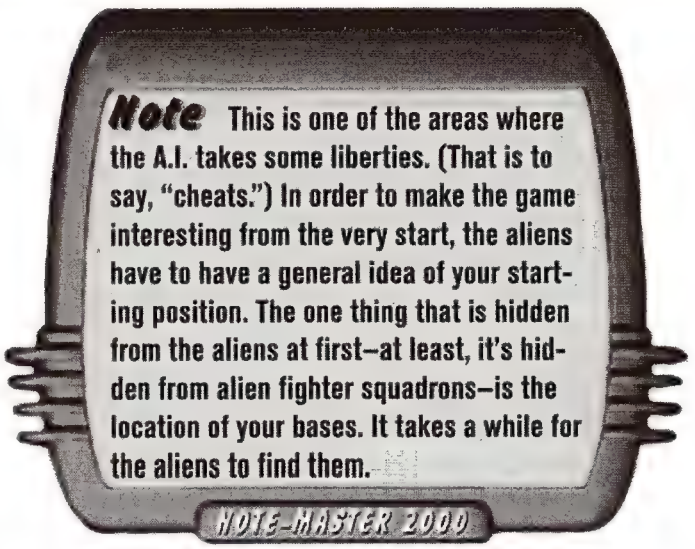
The aliens have a sense of purpose as well. Their overriding, number-one goal is the mirror image of yours: to hold X-COM at bay long enough to complete the Doomsday Weapon and launch it against Earth. In their drive to achieve their ultimate goal, the aliens have the following priorities, which they balance throughout the game:

- **Resource protection:** The aliens' economic structure is very similar to yours. The main use of all the resources gathered by alien mining platforms is the completion of the Doomsday Weapon—the more resources they have, the faster they can complete their weapon. The aliens are, therefore, very protective of their resources.

- **Base protection:** Without their bases, the aliens can't protect *anything*. Therefore, they consider protecting their bases secondary only to protecting their resources.

- **Supply line protection:** The aliens' supply process is the same as yours—bases order equipment and weapons from outposts, and the outpost ships the items via freighter to the base that ordered them. Aliens tend to protect their freighters almost as zealously as they protect their outposts and mining platforms.

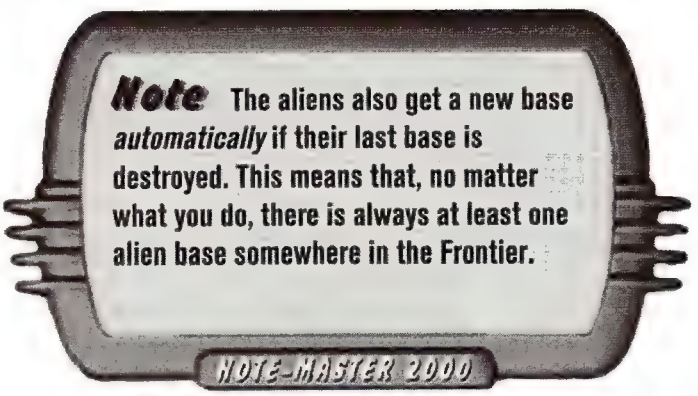
- **Exploration:** Like you, the aliens are somewhat limited when it comes to the amount of the Frontier they can see. When the opportunity arises, alien bases launch probes into adjacent unexplored areas in order to expand their sensor net and locate X-COM installations.



- **Expansion:** Expansion—specifically, the construction of new bases—can only help the aliens complete their primary goal more quickly. The more bases the aliens have, the more outposts and mining platforms they (potentially) have at their disposal. More outposts means more resources—and that means faster completion of the Doomsday Weapon. (See "The Alien Economic System" later in this chapter for details.)

  In order to decide *when* to expand, the alien A.I. assesses the current game situation. The aliens might build a new base under the following conditions:

  - X-COM activity is aggressive.
  - An alien base has been destroyed.
  - Few or no resources are available for Doomsday construction. (The aliens automatically get two new outpost systems each time they build a new base.)
  - The aliens are unable to provide sufficient protection for existing outpost systems.
  - X-COM is on the defensive, and the aliens are in a position to take an aggressive stance.



- **Aggression.** The aliens' level of aggression changes dynamically based on game conditions. When you are in a weak, defensive position, or when you have launched a series of unsuccessful attacks, the aliens are at their most aggressive. When you are on the offensive and achieving success, the aliens

adopt a more cautious posture. Alien aggression is perhaps the most subjective topic when it comes to alien strategic A.I.

ALIEN MISSIONS

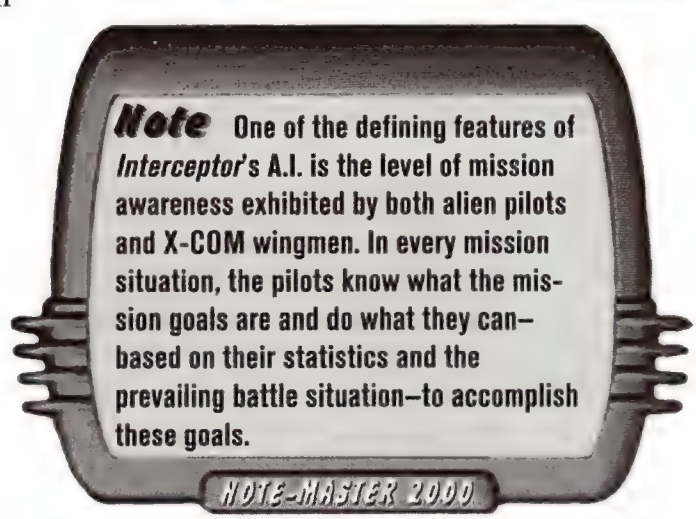
Throughout the game, the aliens constantly evaluate the changing situation and make their offensive and defensive choices accordingly. They react to the overall strategic situation by deciding whether to go on the offensive or take a more conservative, safety-oriented tack. In other words, the aliens play the game based on how *you* play the game.

OFFENSIVE MISSIONS

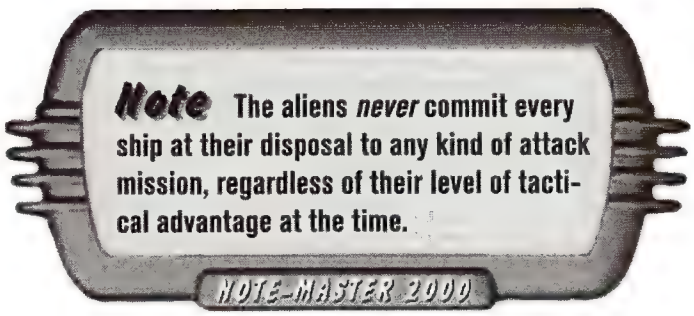
Whether or not the aliens initiate an offensive mission against your spacecraft and installations is governed in general by the items listed in the "Alien Priorities" section earlier in this chapter, especially aggression. The better the current alien situation, the more aggressive the missions they initiate.

The following is a list of aggressive, offensive missions that might be launched by the aliens. The list is prioritized by the level of aggression, from least to most aggressive.

- **Attack X-COM Probe:** When the aliens detect an X-COM probe in or near their territory, they attempt to destroy it as soon as they have a ship available to handle the job. This is the least risky mission available, and thus the most common.
- **Attack X-COM Freighter:** Besides a probe attack, this is the least difficult mission for the aliens to complete. When the aliens need to slow your progress, this is the first type of mission they attempt.



- **Attack X-COM OPP:** This is a means by which the aliens can put a bigger dent in your finances. The destruction of an OPP is a more far-reaching economic blow than the loss of a single freighter, but it is a more risky mission from the aliens' standpoint.
- **Attack X-COM Outpost:** This is the most devastating economic blow the aliens can land on you, and is thus a prime mission for them—assuming, of course, that they can afford the ships to take on such a large target.
- **Cripple X-COM Base:** This is an attack whose purpose is to destroy one or more modules on a particular X-COM base, reducing its effectiveness in launching missions and defending nearby friendly installations. The prime target is usually a Hangar Module, though Downlinks, Personnel Modules, and weapons are also potential targets. This type of mission is usually launched in retaliation after repeated successful missions are launched from a particular X-COM base.
- **Destroy X-COM Base:** This is the most aggressive of all missions, requiring the commitment of a great number of ships and pilots—and as such it is initiated only when the aliens have a distinct tactical advantage. If, during the course of the attack, the aliens are doing badly, a base-destruction mission might be downgraded to a "Cripple Base" mission on the fly.



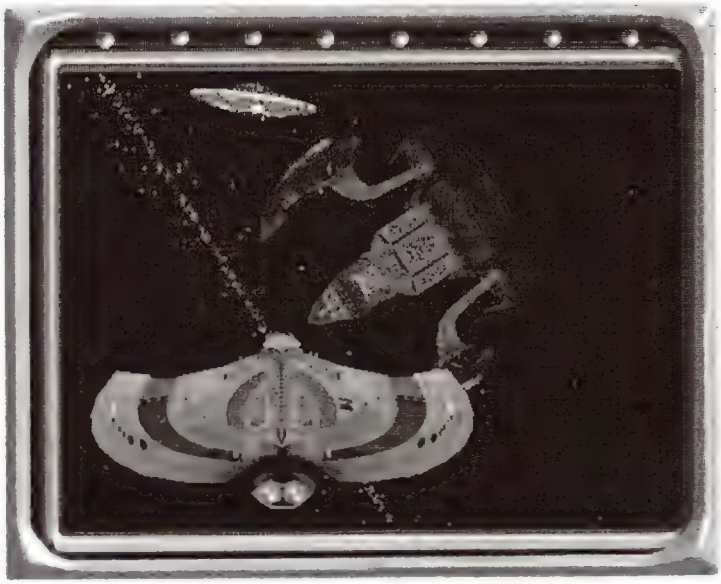
- **Decoy Mission:** Decoy missions are listed last because they require a significant commitment of forces on the part of the aliens. If the aliens have a good tactical advantage, they might launch two attacks almost simultaneously. First, a small attack (like an attack on a probe or freighter) is launched to distract you and draw your ships away. Then, once your ships are committed, a larger attack is launched against one of your outpost systems or bases.

DEFENSIVE MISSIONS

Obviously, the aliens don't commit all of their forces to offensive missions. In fact, defensive missions almost always take precedence over offensive missions for them when there is a choice between the two. This is especially true when you have an advantage over the aliens—but even when *they* have the advantage, they'll commit their forces to the defense

of alien freighters and installations as opposed to sending them on offensive missions whenever the dilemma arises.

The following is a list of alien defensive missions, listed from highest to lowest priority from the aliens' point of view:



- **Outpost Defense:** Outposts are the key to the aliens' success. Outpost defense is, therefore, highest on the aliens' priority list.
- **Base Defense:** The aliens can't defend or attack anything without bases. Therefore, if there are no outposts in danger, the aliens' second priority is to scramble their saucers to defend any base that comes under attack.
- **Mining Platform Defense:** Not as important as outpost defense, but important nonetheless.
- **Freighter Defense:** The lowest of their priorities, but a priority nonetheless. (Just try attacking a freighter and you'll see.)

Note The one factor that is not listed here is the defense of the Doomsday Weapon construction site. This is a separate case. Dedicated squadrons of fighters are always stationed both outside the black hole entrance and inside the alien universe. These saucers are not available for any other missions—they remain on Doomsday duty at all times.

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THE ALIEN ECONOMIC SYSTEM

The alien economy has many functional similarities to your own. Beyond the gathering of resources and the basic supply principles, however, the two systems diverge a bit. The next few sections describe what goes on behind the scenes of the aliens' operation.

OUTPOSTS AND MINING PLATFORMS

Just like you, the aliens get all their funding from outpost systems. The gathering of resources, exchange rate, and so on that apply to alien outposts and mining platforms are identical to those used to determine the resource output of your own outposts and OPPs (see Chapter 2). The one difference here is that 100% of the raw materials collected in alien outpost systems is always available to them—there is no corporate percentage. That means the aliens always have a slight advantage over you in the economics department—an X-COM outpost system produces (on the average) 25% less than would an alien outpost in an identical star system.

Like you, the aliens gain outpost systems as the game progresses. They do not, however, gain them by the same means. The aliens start off with six outposts. Throughout the game, additional alien outpost systems are added in two ways:

- **Automatically:** Every time the aliens build a new base, two new outpost systems are immediately established nearby.
- **Randomly:** In addition, the game makes a die roll at the end of each month to determine if any new alien outposts are established at the beginning of the next. The chance of this occurring increases as the game progresses. (See Table 6.1.)

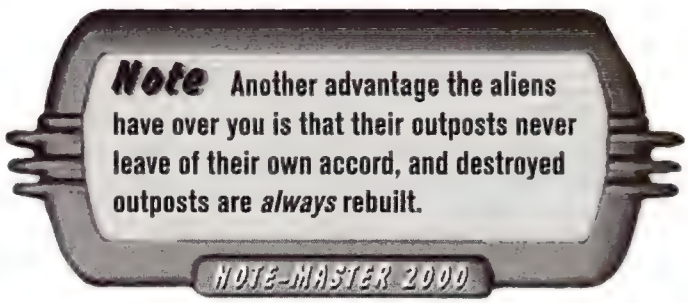


Table 6.1: Chance of random addition of alien outpost systems

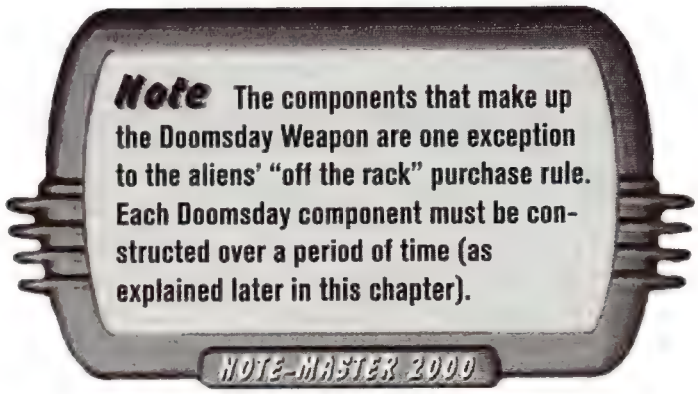
Die Roll	Number of New Outposts Added										
(Month)	1	2-3	4-5	6	7	8	9	10	11	12	After 12
1	0	0	0	0	1	1	1	1	1	1	0
2	0	0	0	1	1	1	1	2	1	1	1
3	0	0	1	1	1	1	2	2	1	1	1
4	0	0	1	1	1	2	2	2	2	1	1
5	0	1	1	1	1	2	2	2	2	2	1
6	0	1	1	1	2	2	2	2	2	2	1
7	0	1	1	2	2	3	2	2	2	2	2
8	1	1	2	2	2	3	3	2	2	2	2
9	1	1	2	2	3	3	3	3	2	2	2
10	1	2	3	3	3	3	3	3	3	3	3

The aliens can only operate 16 outposts at any given time. Once they reach this number, outpost additions cease until the number of operational outposts once again drops below 16.

BUYING AND "MANUFACTURING"—THE ALIEN VERSION

As mentioned earlier, the aliens' lines of supply work much like yours—all their weapons and equipment are supplied by outpost systems that ship the equipment via freighter to the aliens' bases.

One major difference between alien and X-COM economics is that, for the aliens, all equipment is "off the rack." In other words, there is no manufacturing time involved—ever. This is one of the little "cheats" the game uses to help keep things balanced. It has the effect of speeding up the alien supply process and making it more imperative that you attack alien installations and supply lines to slow them down.



The occurrence of play balance problems as a result of this system is prevented by the fact that the technologies available to the aliens at any given time are governed by a three-tiered system, and aliens must allocate some of their resources to the advancement of technology. This is analogous to your own technological research—it's just a bit more simplistic. (The alien "research" system is covered in more detail later in this chapter.)

THE DIVISION OF ALIEN RESOURCES

Here's where the alien economic system diverges most radically from your own. The aliens allocate the funding they receive from their outpost systems to three different game tasks:

- Building the Doomsday Weapon
- Constructing ships and bases
- Advancing technology

The portion of their economic resources the aliens allocate to each depends on the current state of the game.

Building the Doomsday Weapon This is the aliens' ultimate goal, and hence it is their highest economic priority. The Doomsday Weapon is constructed using three different components—the Alien Structural, Weapon, and Drive Components—as discussed in Chapter 3. Each component is an actual production item; the aliens have to buy them just as they would any other piece of equipment. These components, once built, are transported by

special freighter convoys to the site where the Doomsday Weapon is being constructed.

The total number of components (of all three types) required for the construction of the Doomsday Weapon and the cost and construction time for each piece depend on the difficulty level of the game. Table 6.2 reveals the specifics.

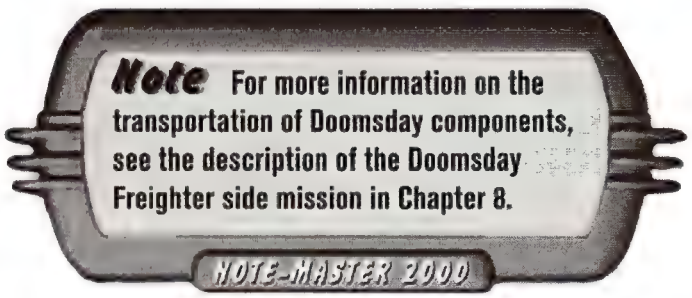


Table 6.2: Cost and production time for Doomsday components

Difficulty Level	Total Number of Components	Alien-Hours to Produce Each	Cost ($)
Beginner	25	100,000	800,000
Experienced	25	90,000	750,000
Veteran	25	85,000	700,000
Genius	20	80,000	650,000
Superhuman	18	75,000	600,000

The total number of components is broken down into the three constituent parts: Structural, Weapon, and Drive Components. The aliens always build the components in the aforementioned order, and they must complete all of one component before they can start producing the next. Table 6.3 shows the number of components of each type necessary for Doomsday construction at each difficulty level.

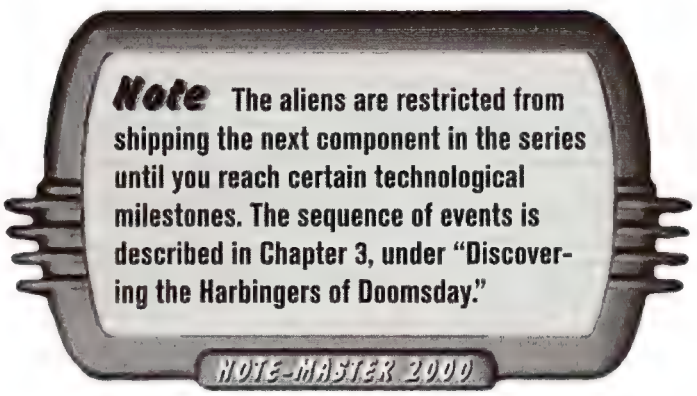


Table 6.3: Breakdown of required Doomsday components

Difficulty Level	Alien Structural Component	Alien Weapon Component	Alien Drive Component
Beginner	8	8	9
Experienced	9	8	8
Veteran	10	8	7
Genius	7	7	6
Superhuman	7	6	5

Although the aliens are prohibited from *shipping* Doomsday components based on the technological milestones described in Chapter 3, they are not prevented from *producing* the next component down the line. As soon as the requisite number of the previous component is shipped, the aliens immediately start production on the next one in the series and stockpile the components for shipment later in the game.

> **Tip** Launch attacks against Doomsday freighter convoys at every opportunity. Each convoy you manage to destroy prevents a piece of the Doomsday Weapon from arriving at its destination. This slows down the production of the weapon and forces the aliens to allocate more of their resources to the Doomsday Weapon (which slows down their base and fleet production and retards their research progress).
>
> TIP-O-MATIC

Constructing Ships and Bases The aliens' second highest resource priority is construction tasks like building bases and maintaining the fleet. This includes the upgrade of base modules, rearming and reoutfitting ships, adding new fighters to the fleet, repairing damage inflicted by your attacks on alien installations, and so forth.

> **Warning** If you just sit back and let the action come to you rather than acting aggressively and launching attacks of your own, the aliens are able to allocate more of their resources to the construction of Doomsday components.
>
> WARN-TRON

Advancing Technology The last of the aliens' three resource-allocation priorities is research. The aliens have a three-tiered technology system, with each tier known as a "Tech Level". Instead of downloading more advanced technologies from their homeworld, they use a much simpler system: They *buy* their way to better technology. Each new level of technology they attain costs them an amount of money that varies depending on the game difficulty level. The aliens always start at Tech Level 1.

The technologies available at each of the three alien Tech Levels are shown in Table 6.4. Table 6.5 shows the total amount of research money the aliens must accumulate to advance from one Tech Level to the next.

Table 6.4: Alien technology availability by Tech Level

Tech Level 1	Tech Level 2	Tech Level 3
Alien Hull Alloys	Alien Weapon Component	AATS
Alien Structural Component	Beam Mine (alien)	Accumulator Shields
Dimension Jump Drive	Cloaking Device	Alien Drive Component
Alien Drone	ECM Pod	Doppelganger Missile
Elerium Torpedo	Enveloping Fusion Torpedo	Advanced ECM Pod
Electroplasmic Shields	Graviton Pulse Drive	Passive Cloaking Torpedo
Emissions Targeting System	Missile Mine (alien)	Phase Cannon
Explosive Mine (alien)	Parallax Torpedo	Shade Fighter
Gravity/Induction Drive	Psi Blaster	
Plasma Pulse Cannon	Phantasm Saucer	
Sensor Probe (alien)	Tachyon Pulser	
Ship Damage Control Computer	Trans-Dermal Armor	
Spectre Saucer	Trans-Dimensional Shields	
Spirit Freighter		
Tractor Beam		
Tri-Titanium Armor		
Vector Control Thrusters		
Wraith Saucer		

Table 6.5: Research dollars required for alien Tech Level advancement

Difficulty Level	Tech Level 1 to Tech Level 2 ($)	Tech Level 2 to Tech Level 3 ($)
Beginner	2,000,000	4,000,000
Experienced	1,500,000	3,000,000
Veteran	1,200,000	2,400,000
Genius	1,000,000	2,000,000
Superhuman	800,000	1,800,000

Despite the fact that aliens buy their technology, you can still affect the speed at which they gain it by destroying the Data Receptor Pods on their bases. Data Receptor Pods (illustrated in Figure 6.1) are the alien equivalents of X-COM Downlink Modules.

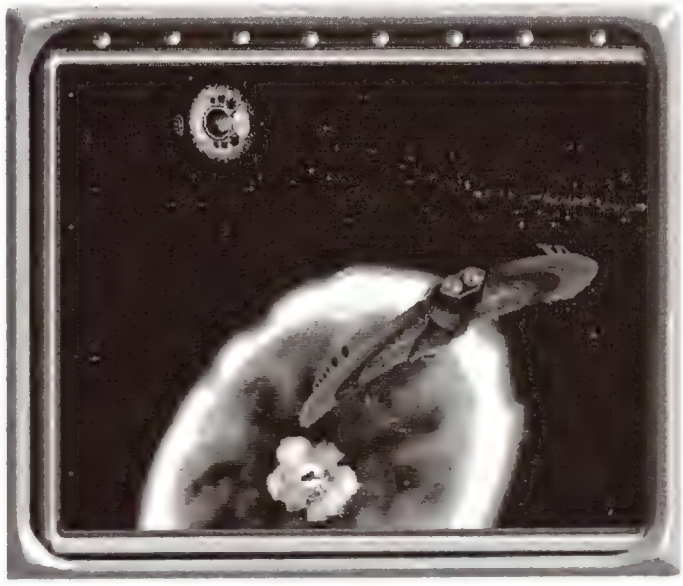
Here's how it works. The aliens can contribute up to $20,000 per game-week to research for each Data Receptor in operation. The more Data Receptors they have in operation, the faster they can accumulate research funds. Each Data Receptor you destroy slows down the aliens' research effort.

Figure 6.1

An alien Data Receptor Pod

COMBAT PERFORMANCE

Once you get under the hood, you can see how many different factors go into the aliens' decision-making processes in the strategic portion of the game. You might think that the combat A.I. would be simple in comparison. Well, it is a *bit* simpler, but there are quite a few behind-the-scenes events and statistics that lead your adversaries to behave the way they do in battle. Paramount among these factors are pilot statistics and species, ship type, and mission parameters. The remainder of this chapter focuses on these and other issues that affect the alien combat A.I.



ALIEN PILOTS

One aspect of *Interceptor*'s combat model that mimics the previous X-COM games is that each enemy

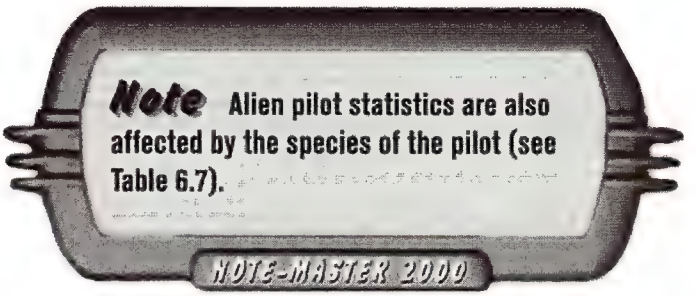
Note For the most part, the statistics applied to alien pilots are the same as those applied to X-COM wingmen. See Chapter 7 for full details.

NOTE-MASTER 2000

pilot performs differently based on its individual statistics and its species. The following sections discuss the effects of pilot attributes on combat A.I.

GENERATING PILOT STATISTICS

Every alien pilot has seven defining characteristics that affect various aspects of the pilot's performance. All of these statistics are generated by a random die roll (modified in some cases).



Intelligence Intelligence is the pilot's ability to analyze a situation and act on this analysis. Each pilot's base Intelligence is between 50 and 100 (randomly generated).

The A.I. effects of this statistic are as follows:

- Pilots with high Intelligence are more likely to take independent action to further the goals of the mission. In other words, they are more "mission aware."
- Pilots with high Intelligence are more likely to devise "decoy tactics," such as leading enemy ships into the weapons range of a base.
- Pilots with high Intelligence are more likely to immediately choose the best possible weapon for a given target. Even when they don't choose the best weapon immediately, pilots with high Intelligence take less time to analyze the effects of the weapon they are currently using and switch to a more appropriate weapon when possible.
- Pilots with high Intelligence are more likely to select optimal targets based on situational analysis from moment to moment.

Firing Accuracy Firing Accuracy represents the pilot's ability to target both beam and missile weapons. An alien pilot's base Firing Accuracy is a randomly generated number between 45 and 100.

The A.I. effects of Firing Accuracy are obvious: A pilot with higher Firing Accuracy is more likely to hit a target.

Flying Ability Flying Ability represents the pilot's adeptness at basic flight operations—offensive attack runs, defensive maneuvers, evasive action, and so forth. The base Flying Ability for an alien pilot is a random number between 55 and 100.

Some of the A.I. effects of Flying Ability are as follows:

- The higher a pilot's Flying Ability, the more likely he is to execute complex evasive and offensive maneuvers. This should not be confused with Intelligence, which determines not if the pilot can perform a maneuver well, but if the pilot is aware that the maneuver exists.
- The higher a pilot's Flying Ability, the more accurate the pilot is when targeting beam weapons. Here Flying Ability interacts closely with Firing Accuracy, since—like you—the aliens must keep their targets in the gun sights in order to hit them with beam weapons.

Aggressiveness Aggressiveness determines the level of risk the pilot is willing to take in combat. The higher the pilot's Aggressiveness, the more risk he's willing to take. The base Aggressiveness score for an alien pilot is between 60 and 100.

The A.I. effects of Aggressiveness are as follows:

- Aggressiveness is linked to Bravery (defined later in this section). As Bravery decreases in combat, so, too, does Aggressiveness.
- High Aggressiveness results in a bold, decisive pilot who is quick to engage any and all enemy targets. *Extremely* high Aggressiveness borders on recklessness—taking unnecessary risks, attacking vastly superior targets, and so forth.
- Low Aggressiveness results in a more cautious pilot who is less likely to independently take offensive action. Such a pilot is more likely to fly cover for his companions than lead an attack. Less aggressive pilots seldom attack a ship more powerful than their own unless their lives are in immediate danger.

Bravery Bravery governs how a pilot reacts to adverse battle conditions. This is the factor that governs whether a pilot stays and fights or runs screaming from the battlefield when the tide turns unfavorably. Base Bravery for alien pilots is between 60 and 100. Unlike other statistics, Bravery can temporarily increase and decrease in the course of a single battle.

The A.I. effects of Bravery—and the combat conditions that cause the statistic to temporarily increase or decrease during combat—are as follows:

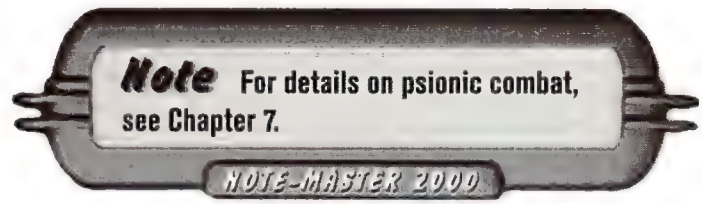
- The higher a pilot's Bravery, the more likely he is to remain in the battle. Lower Bravery makes a pilot more likely to run away.
- The effectiveness of the Psi Blaster is directly dependent on the target's current level of Bravery. (See Chapter 7 for details.)
- Pilots experience a 5-point Bravery increase every time an enemy ship or base module is destroyed in battle, a 10-point increase when an enemy

outpost or OPP is destroyed, and a 25-point increase when an entire enemy base is destroyed. These increases are cumulative, and last for the duration of the battle.

- Pilots experience a 25-point decrease in Bravery if a friendly base is destroyed in combat. This decrease lasts for the duration of the battle.
- When a pilot's Bravery has been reduced to 10 or less, he is considered to be at "panic level." There is a 50% chance every 30 seconds that a panicked pilot will run away from the battle. A pilot whose Bravery reaches 0 automatically runs away.
- A pilot's Bravery can only exceed 100 temporarily, as the result of in-battle bonuses. A pilot's Bravery can *never* fall below 0.
- Pilots' Bravery statistics return to their original (pre-battle) levels as soon as the battle is over.
- A pilot's Bravery level affects his basic priorities. (See Chapter 7 for details.)

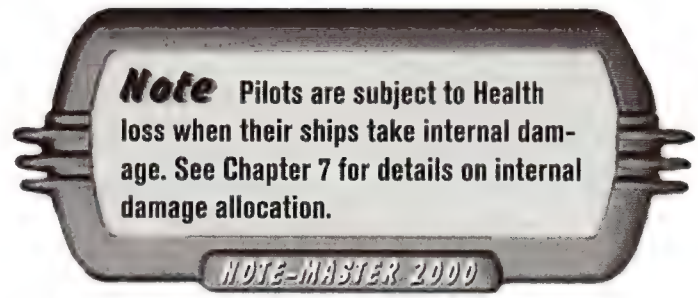
Psionics The Psionics statistic represents the pilot's ability to initiate and repel psionic attacks. Alien Pilots have a base Psionics rating of 40 to 100 points. The Mutons are the one exception to this rule—they always have a Psionics rating of zero.

Psionics level affects both the pilot's ability to use the Psi Blaster and how well the pilot resists Psi Blaster attacks.



Health A pilot's Health rating determines how many points of damage he can withstand in combat before lapsing into unconsciousness or dying. The pilot's base Health statistic is 5 points plus a random number of points between 1 and 10.

The A.I. effects of Health (and Health loss) are as follows:



- When a pilot's Health drops to 5, his Firing Accuracy and Flying Ability are reduced to 50% of their normal levels.
- When a pilot's Health drops to 2, his Firing Accuracy and Flying Ability are reduced to 25%.

- When a pilot's Health drops to 0, he becomes unconscious. His ship continues flying, maintaining the speed and course it had at the time the pilot lost consciousness.
- When a pilot's Health drops *below* 0, he is dead. Assuming the ship is still intact, it continues flying, maintaining the speed and course it had at the time the pilot died.
- Pilots regain Health at the rate of 1 point per minute (up to their original Hit Point total minus 25%, rounded down). Obviously, this does not apply to dead pilots.

Effects of Pilot Species on Base Statistics Once the base statistics of an alien pilot are generated, points are added to (or subtracted from) some of them depending on the pilot's species. These modifiers are shown in Table 6.7.

Table 6.7: Species modifiers for alien pilot statistics

Species	Intelligence	Firing Accuracy	Flying Ability	Aggressiveness	Bravery	Psionics	Health
Aereon	+20	+25	+25	+30	+25	+10	+5
Ethereal	+10	+5	+15	+10	–	+35	-1
Muton	-20	-20	–	+20	–	–	+10
Psilord	+5	–	–	-20	–	+60	–
Sectoid	–	–	–	–	–	+20	-2

PILOT SPECIES

As usual, you are up against a variety of alien species in *X-COM Interceptor.* A few of them—the Sectoids, Mutons, and Ethereals—are familiar adversaries. The other two—the Psilords and Aereons—have never before been encountered.

As you might suspect from studying Table 6.7, each alien species carries its own unique set of qualities and abilities into battle. As the game advances, the mix of aliens you meet in battle changes. The relatively unskilled Muton and Sectoid pilots you encounter in the beginning of the game give way to the more skilled Ethereals and Psilords, then finally to the deadly Aereons.

Each type of alien is described briefly here. Take a few moments to familiarize yourself with their abilities.

Tip In combat, you can find out the species of an alien pilot by making a close pass or two while you have his ship targeted. The ID of the alien appears in your multifunction display once a scan is successfully accomplished.

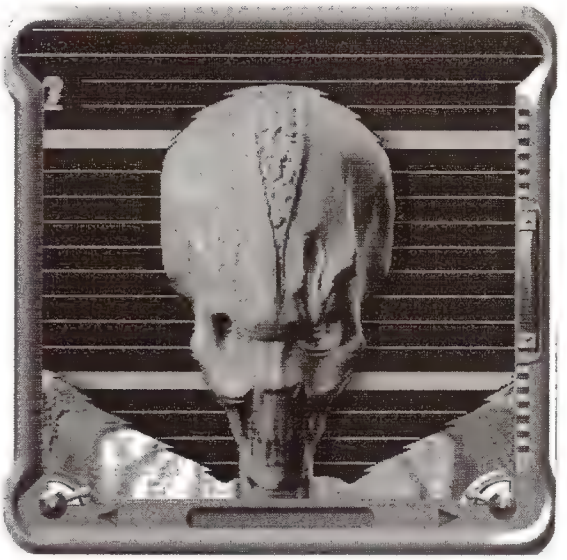
TIP-O-MATIC

Aereons Aereons are one of the two new aliens in *Interceptor.* You aren't likely to encounter them until you are about halfway through the game (later at the lower difficulty levels). They usually start showing up at about the same time the aliens start employing Phantasm saucers. In fact, Aereons are generally only found piloting Phantasms and Shades.

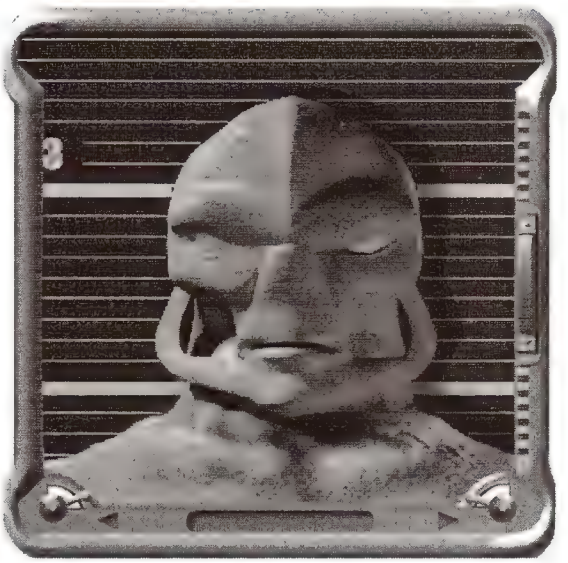
Aereons are genetically engineered super-pilots. They are extremely adept at both offensive and defensive combat maneuvers, and are positively deadly when it comes to weapons targeting. There isn't a more formidable opponent in the game than an Aereon pilot (especially if he happens to be at the stick of a Shade).

Ethereals Last time X-COM encountered these guys, they were gliding around through the cities of Earth causing no end of trouble. You might not recognize them right away—they're not wearing their hoods this time—but they're the same Ethereals you know and love. In *Interceptor*, you'll usually start encountering them in about the fourth or fifth month of the game. (Of course, this can vary depending on difficulty setting and the game situation.)

Ethereals were deadly on the ground, but they're even deadlier in the cockpits of space fighters. Their flying and weapon-handling capabilities are second only to those of the Aereons. Ethereal pilots are most frequently found aboard Spectre and Phantasm fighters.

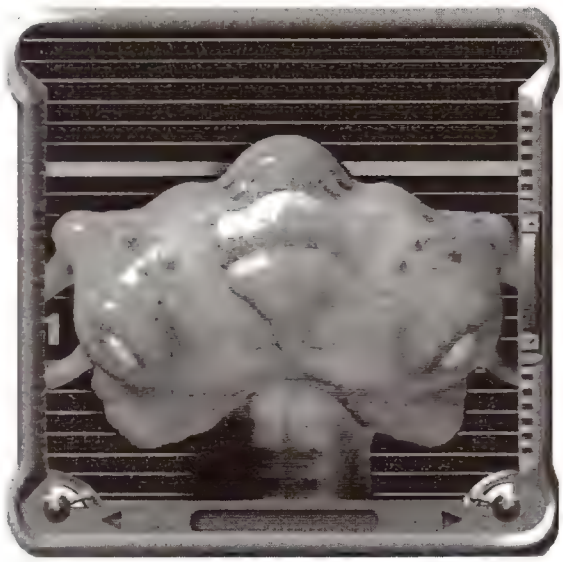


Mutons Here's another old "friend" from the First Alien War, back to cause you great pain and suffering once again—this time in deep space. The Mutons in the Frontier are obviously quite a bit more intelligent than the Muton commandos encountered in AW I, since they seem fairly adept at complex tasks like



space combat. They appear most frequently in Wraith and Spectre fighters in the early portions of the game.

Fortunately, they aren't *that* much smarter. Mutons are the least gifted of all the alien pilots. They are, as a general rule, substandard in both Flying Ability and Firing Accuracy. They also tend to be overly aggressive, which often leads to their making foolish mistakes. The Mutons' only redeeming feature is their strong hides—because of their extremely high Health statistics, it's unlikely you'll ever cause a Muton pilot to lose consciousness.



Psilords Like Aereons, Psilords are engineered specifically for space fighter operations, but their intended role is much different than those of the other pilot types. Instead of taking an active part in the battle, Psilords tend to stay several kilometers away from the main battle. Their job is to use their tremendous psionic abilities to coordinate the attack efforts of the other alien pilots in the battle. When a Psilord is present, the stats of the other pilots are enhanced as shown in Table 6.8.

Table 6.8: Bonuses imparted by Psilords to alien pilots.

Statistic	Psilord Enhancement
Intelligence	+10
Firing Accuracy	+5
Flying Ability	+5
Bravery	+10

Psilords almost never enter the battle directly until a majority of the other alien ships present are either destroyed or disabled. Psilords start appearing sometime after the middle of the game, usually aboard Phantasm saucers.

> **Tip** If you see an alien ship hanging out on the periphery and not joining the battle, chances are it's a Psilord. You should try to take out a Psilord as quickly as possible, since alien pilots lose their temporary ability enhancements as soon as the Psilord is removed from the equation.
>
> TIP-O-MATIC

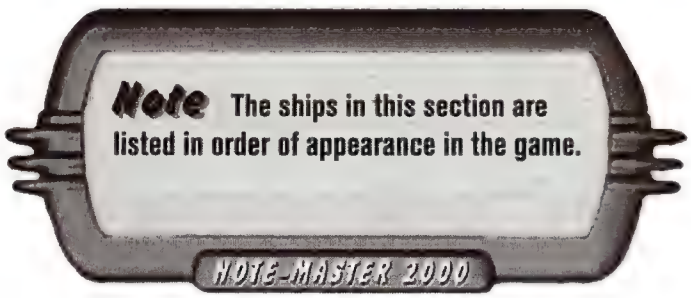
Sectoids Last but not least we have another old buddy from the First Alien War. According to UFOlogy, Sectoids in various colors and forms have been

visiting Earth at least since one of them took a wrong turn at Roswell, New Mexico in 1947. The Sectoids in the Frontier look a bit different than the ones X-COM has met before, but there's no doubt they're members of the same species.

Like Mutons, Sectoid pilots are common from the start of the game. They are strictly average pilots, with no special abilities besides their heightened Psionics level (which doesn't become an issue until alien ships start sporting Psi Blasters). These guys are most frequently encountered piloting Wraiths, Spectres, and alien freighters.

ALIEN SHIPS

Besides individual pilot statistics, the factor that most defines the performance of an alien in battle is the ship he flies. Every ship behaves differently and has its own set of special features—and limitations—that set it apart from all the rest.



FIGHTERS

The ships you'll encounter most often in the game are alien fighters. The aliens use four different fighter designs over the course of the game, all of which are described in the following sections. The defining characteristics of each ship are shown in Table 6.9.

Table 6.9: Alien fighter statistics

Ship	Hull Hit Points	Beam Hardpoints	Missile Hardpoints	Special Hardpoints
Wraith	150	3	2	2
Spectre	200	2	3	4
Phantasm	350	6	3	2
Shade	400	Special	Special	Special

Wraith Wraiths are the most basic fighters in the alien fleet, and you'll be intimately familiar with their abilities before you get your first monthly report. Wraiths are fast and nimble.

Maneuverability-wise, they have a slight advantage over Lightning II interceptors, but at least they use conventional bank-and-roll maneuvering tactics. Also, the quick response time of these fighters is offset by the fact that they are generally piloted by Mutons and Sectoids, the least skillful pilots of the bunch.

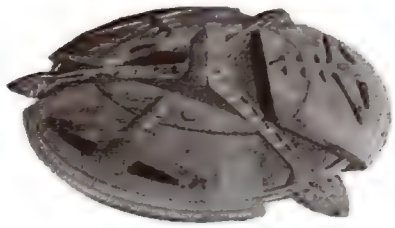
Wraiths also outgun you slightly. Of course, the alien weapons at the beginning of the game (Plasma Pulse Cannons) are more effective than your lasers. Moreover, the Wraiths can carry *three* beam weapons to your two. Fortunately, this seldom makes much of a difference, once again because the pilots' abilities (or lack thereof) balance out the superiority of the craft they're operating.

Spectre Depending on the game difficulty, Spectre saucers start appearing sometime in the first couple of months. (The higher the difficulty, the sooner they appear.) The first time you face these babies in combat, you'll know the difference right away. They are heavier and more solid than Wraiths, but despite their greater mass they seem to maneuver much more fluidly. They are adept at dodging missiles and beams alike, and can turn on a dime. Even the Mutons and Sectoids that pilot these ships early on look good behind the controls.

> **Tip** **The first time you encounter a squadron that includes Spectres, abort the mission at the briefing unless your attack force for the mission includes at least three ships. You will suffer greatly against Spectres if you go into battle with insufficient force. Once Spectres are commonplace, add one to the number of ships you usually send on each mission type.**
>
> TIP-O-MATIC

Maneuverability is the strong point of this ship. As far as armament goes, Spectres have the same missile complement as an X-COM Firestar, and *fewer* beam weapon mounts. Even so, with their heightened motive capabilities, they can be more than a match for Lightnings and Firestars.

Phantasm Here's an alien fighter that you should truly fear. Phantasms are very traditional flying saucers when it comes to maneuvering. Using Vector Control Thrusters, they jink, dodge, parry, and sideslip their way through a battle, making them very difficult to shoot down with beam weapons. Their erratic movement also makes it difficult to obtain a missile lock.



Not that that usually matters. One of the Phantasm's six beam weapons is used almost exclusively as an anti-missile gun. A large percentage of the missiles that you manage to fling at a Phantasm will come close only to be shot down before they can connect. Add to that the Phantasm's incessant spin (which changes its shield orientation constantly), and you get a ship that's very hard to kill.

Phantasms make their appearance sometime around the fifth to seventh month of the game (though they can appear earlier, depending on game difficulty level and alien technological progress). They are usually flown by Ethereals, Aereons, or Psilords. (As if they weren't hard enough to fight already!)

Shade The last alien fighter to appear in the game (from sometime around the seventh month on) is also the most formidable in the aliens' arsenal. Unlike the other three alien fighters, the Shade doesn't even remotely resemble the traditional flying saucer shape usually favored by the aliens. In fact, its influences may lie more along Terran lines—the fighter superficially resembles the atmospheric jet fighters of the 20th century.

Another unique attribute of this ship is that it's always equipped with the same weapons and systems. You would think that you are at a slight advantage as a result of knowing what's in store for you—unfortunately, though, there is so *much* in store for you that you might not live long enough to take advantage of your knowledge.

Shades are equipped with the following:

- Graviton Pulse Drive (2 engines)
- Trans-Dermal Armor
- Accumulator Shields
- Psi Blaster (1)
- Phase Cannon (2 Forward, 1 Rear)
- Tracer Cannon (2)
- Passive Cloaking Torpedo Launcher (1)
- Enveloping Fusion Torpedo Launcher (1 Forward, 1 Rear)
- Cloaking Device
- Advanced ECM Pod

Among the items in this deadly combination of systems is one that is unique to this ship: Accumulator Shields. This insidious defensive system absorbs all beam weapon energy directed at it and channels that energy into the craft's shield- and weapon-charging systems. The result is that every beam weapon hit *increases* the strength of the shield rather than reducing it. This shielding system makes the Shade the single hardest ship in the game to kill. Missiles give you the best chance.

> **Tip** When you start encountering Shades regularly, make sure that all of your ships are equipped with either Phase Cannons or Tachyon Pulsers. These are the only two beam weapons that are able to inflict damage on Accumulator Shields.
>
> TIP-O-MATIC

> **Tip** Just because you now know the basic configurations of all the alien fighters doesn't mean you can become complacent. Just as you have the ability to custom-design your interceptors, aliens can add the weapons and equipment they want to their own fighter craft (except for the Shade). That means that the performance of a given alien ship can change from mission to mission.
>
> TIP-O-MATIC

One final piece of bad news to add to the rest is the presence of two rear-mounted weapons systems: a Phase Cannon (with a 55 degree field of fire) and an Enveloping Fusion Torpedo Launcher (it fires glowing balls of light that look different than, but nevertheless behave exactly like, Enveloping Fusion Torpedoes). These systems tend to discourage any ship that tries to stay on the Shade's tail.

Shades are always piloted by Aereons or Ethereals.

OTHER SHIPS

In addition to the four alien fighters, you will encounter two other ships on and off throughout the campaign: the Spirit Freighter and the Harbinger Tug. (Well, two and a *half* ships, really, if you also include Alien Drones.) Although none of these is nearly as dangerous as a fighter, you should know what you're up against when you meet them.

The ships are described in the following sections. Their statistics are shown in Table 6.10.

Table 6.10: Statistics for miscellaneous alien ships

Ship	Hull Hit Points	Beam Hardpoints	Missile Hardpoints	Special Hardpoints
Spirit	500	1	–	–
Harbinger	250	2	–	1
Drone	100	1	–	–

Spirit Freighter Alien freighters are commonplace in the Frontier—since the aliens use them to ferry cargo from their outposts to their bases just like you do, they are at least as common as X-COM freighters. These big, lumbering behemoths are, for the most part, really easy targets. They have only one beam weapon mount, no armor, and minimal shielding. All you have to do is get into weapons range, fire off a few low- or medium-yield missiles and...poof! No more freighter.

Like so many things in life (and in *Interceptor*), that's easier said than done. Alien freighters seldom travel alone—they are usually accompanied by at least a couple of fighters. In addition, starting at about six months or so into the game, many freighters are equipped with a swarm of armed, automated Drones that they unleash upon unsuspecting X-COM pilots to make their lives miserable. (See the Drone description for details.)

Harbinger Tug Harbinger Tugs are encountered only in Doomsday freighter missions. (See Chapter 9 for details.) Their sole function is to tow pieces of the Doomsday Weapon from alien outposts to the alien-dimension-entrance black hole.

The tug is equipped with only three noteworthy systems: a Tractor Beam and two Tachyon Pulsers. Obviously, the main purpose of the Tractor Beam is to tow the Doomsday component, but why the Tachyon Pulsers? When an enemy ship gets within weapons range, the tug opens fire and attempts to disable the target. If it is successful, there is a chance that the tug will abandon its Doomsday cargo, latch onto the disabled X-COM ship, and tow it away; not a desirable situation, to be sure.

Luckily, the Tachyon Pulsers are pretty easy to avoid (they can only fire in the tug's forward arc). As long as you stay well away from the front end, Harbingers, with their lack of shields and armor, are pretty easy to bring down.

Alien Drone Drones are the smallest alien ships you'll ever have to deal with. They are so small, in fact, that you often don't see them until you are right in the midst of a swarm of them and they open fire.

These tiny, automated flying guns are launched by some Spirit Freighters as a defensive screen. Starting about six months into the game, make sure you watch your sensors closely whenever you are approaching a freighter—that's the only way you'll see the Drones before it's too late. The easiest way to deal with them is to kill the freighter from a distance and then just pick off the Drones at your leisure—once the freighter is destroyed, about 75% of the Drones lose guidance and become dormant.

Drones can be armed with almost any kind of beam weapon currently available to the aliens.

ALIEN FACILITIES

Success in *Interceptor*—especially at the higher difficulty levels—requires more than just sitting back and reacting to repeated alien attacks. To slow the aliens down and keep them from completing their Doomsday Weapon, you have to take the initiative. You have to locate their facilities and send your interceptors out to give them a bloody nose.

> **Tip** **It is a good idea to practice attack missions against large alien facilities in the Combat Simulator before attempting such an attack in a campaign. That way, you can experiment with different tactics and weapon combinations without risk, and get your skills honed for the real thing.**
>
> TIP-O-MATIC

The three alien facilities you can attack are mining platforms, bases, and outposts—each of which mirrors the operation and function of the analogous X-COM structure. All are difficult targets to destroy and attacking them should not be taken lightly, but sooner or later you have to get up the nerve to give it a try.

The following sections describe the characteristics of each facility. All the vital statistics can be found in Table 6.11.

Table 6.11: Alien facility statistics

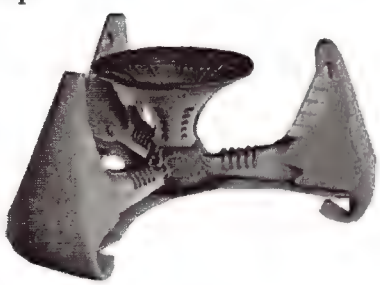
Alien Facility	Hull Hit Points	Shield Strength	Beam Weapons	Missile Weapons
Mining platform	2500	1000	5	–
Outpost	3300	1500	4	–
Base	5000	Special	Varies	Varies

ALIEN MINING PLATFORMS

Alien mining platforms serve the same function as corporate OPPs—they mine raw materials from planets and asteroids. These facilities should be your first targets when you start taking the battle to the aliens. They are relatively weak compared to outposts and bases, and—though they *do* have one more beam weapon mount than outposts—their defenses are short-range and have limited firing arcs. Don't take that as an invitation to let your guard down, though—mining platforms can dish out quite a bit of damage to any ships that wander too close.

The destruction of an alien mining platform has the same effect on the alien economy that the loss of an OPP has on yours: The profits from the outpost system where the destroyed mining platform was located are reduced until the facility can be rebuilt. (Aliens *always* rebuild destroyed mining platforms.)

ALIEN OUTPOSTS



Once you've cut your teeth on mining platforms, it's time to step up to the next challenge: outposts. Outposts are a bit more challenging than mining platforms in all respects—better hull, better shields, better weapons, and (often) a formidable squadron of protectors waiting nearby. Keep all these factors in mind before you decide to go in for the kill.

You know how important your outposts are to your survival? Well, the aliens are just as dependent on theirs. The destruction of an alien outpost means the aliens lose all profit from that star system until the outpost can be rebuilt. Every time you successfully attack one of these facilities, you strike a powerful blow against the alien economy.

ALIEN BASES

It is the pinnacle of foolhardiness to launch an attack against an alien base before you are really ready for it. Alien bases are the most powerful and well-defended targets in the game (with the exception of the Doomsday Weapon, of course). An alien base can have up to ten weapons mounts (beams, missiles, or any combination thereof) and any type of shield that your own bases can use. In fact, alien bases use the same sort of modular construction as X-COM bases, and can have just about

any equipment an X-COM base can have. On top of that, there are almost always fighter squadrons in the vicinity (or in the hangars) lying in wait for your arrival.

> **Tip** There is a shortcut for destroying an alien base. Concentrate your fire on the connecting points for each of the three dangling tentacles. Shoot off all three of these, then concentrate your fire on the reactor core—the area just above the ball on the bottom of the base. Once all four of these points have been destroyed, the base explodes. (This method requires significantly fewer hit points than just plugging away at the hull in general.)
>
> TIP-O-MATIC

Obviously, the complete destruction of an alien base is quite a coup. It significantly impacts the level of alien military activity in the general vicinity. But it's not always necessary to destroy the entire base to achieve useful results. For example, if you take out all the base's Hangar Pods, the fighters stationed at the base have nowhere to land. This also reduces alien military activity without your having to risk your ships in a drawn-out base attack that might not succeed.

PROBES AND MINES

The only other alien objects you'll encounter in the game are probes and mines. The aliens' uses of probes and mines are interrelated—probes are often defended by minefields.

> **Note** It takes 100 points of damage to destroy an alien probe.
>
> NOTE-MASTER 2000

PROBES

The aliens employ two different probe types, each of which serves a very different purpose. Although probes themselves are not armed, there are often alien ships nearby. Alien probes are also frequently protected by minefields (described later in this chapter).

Sensor Probes Analogous to X-COM Sensor Probes, alien Sensor Probes are used to explore uncharted areas and search for X-COM ships and installations. Like the X-COM versions, these probes have a limited life span. Whenever you encounter an alien Sensor Probe, it's a good idea to destroy it as soon as possible.

Data Jammer Probes These unique alien devices are launched toward X-COM bases, where they hold a position and set up a jamming signal that prevents the base from downloading research data.

The life span of Data Jammer Probes is limited to about a month. Even more than Sensor Probes, Data Jammers should be dealt with at once. Every hour they remain near your bases, you lose valuable research time.

MINES

> **Note** It takes 50 points of damage to destroy an alien mine.
>
> NOTE-MASTER 2000

The aliens only use mines for one purpose: probe defense. Invisible from even short range, these tiny weapons can cause a great deal of damage in a very short amount of time. The aliens employ three types of mines at different stages in the game.

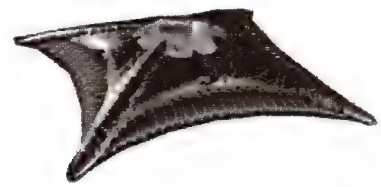
Explosive Mines This is the most basic type of alien mine, and probably the first you'll encounter. An Explosive Mine blows up if an enemy ship passes within .2 kilometers of the mine's position. The explosive damage dealt by this mine is the same as the direct damage dealt by an Elerium Torpedo.

Missile Mines Missile Mines are a new advance in mine warfare. Each mine has a missile launcher system that can hold the same number of missiles as a ship-mounted system. The mine launchers can employ any missile type except Doppelganger Missiles, Parallax Torpedoes, Nova Bombs, and Passive Cloaking Torpedoes.

> **Tip** Depending on the mines' proximity to one another, you can often detonate an entire explosive minefield by simply shooting a single mine. The collateral damage from the one mine blows up the ones around it, and so on, and so on.... Obviously, this should only be attempted at long range.
>
> TIP-O-MATIC

Missile Mines are the only mines that are deadly at fairly long range. They can lock onto enemy targets at a distance of up to one kilometer. Once they fire a missile at one target, they begin scanning for other targets in their range. They seldom unleash an entire complement of missiles at a single target. One nasty little surprise these mines pack is that, once their missile supply is depleted, they turn into weaker versions of the Explosive Mine, exploding when an enemy passes within .2 kilometers.

Beam Mines Beam Mines are the most dangerous of the three alien mines. Each one has an omni-directional beam weapon mount that can house any beam weapon currently available to the aliens—with the exception of Tracer and Tracking Tracer Cannons, Tachyon Pulsers, and Psi Blasters.



Beam Mines can track targets up to .5 kilometers away with deadly accuracy. The worst part is that they have an unlimited power source—they can fire constantly until you manage to destroy them.

Chapter 7

LET'S WASTE SOME ALIENS!

THE STRATEGY ELEMENTS of *X-COM Interceptor* take up a significant amount of your time each game, but research, resource management, and ship design are just a means to an end. Certainly these tasks are important—but you'll spend most of your time in the cockpit, blasting aliens into glowing space dust.

This chapter discusses all the elements important to combat, starting with locating alien ships and installations and selecting wingmen. It goes on to describe the specifics of interceptor controls and systems and how they function during combat. The final section of the chapter takes you to school, offering some maneuvering and combat strategies that will help give you an edge when you're ready to go head to head with the enemy.

FINDING THE ALIENS

Before you can leap into the cockpit and start blowing away your foes you have to *find* them. In many cases, this is pretty easy—wait around long enough and they'll eventually come to you. Even so, it is helpful to know how enemy ships are detected and what you can do to actively seek out the bad guys and avoid becoming an eternal victim.

SENSORS AND SENSOR RANGES

Space is vast, and using contemporary equipment, it would be darned near impossible to locate an object as small as an alien fighter until it was right on top of you. It's lucky for you that, by the time X-COM bases started operating in the Frontier, sensor technology had made significant advances.

At the start of the game, all your bases, interceptors, and probes are equipped with Standard Sensors—advanced, long-range sensing equipment capable of detecting hostile craft at vast distances. The green rings around your ships, installations, and probes on the CSD denote the object's maximum sensor detection range—any object within this ring automatically appears on the map and remains on the map as long as it is within the sensor ring. (See Figure 7.1.)

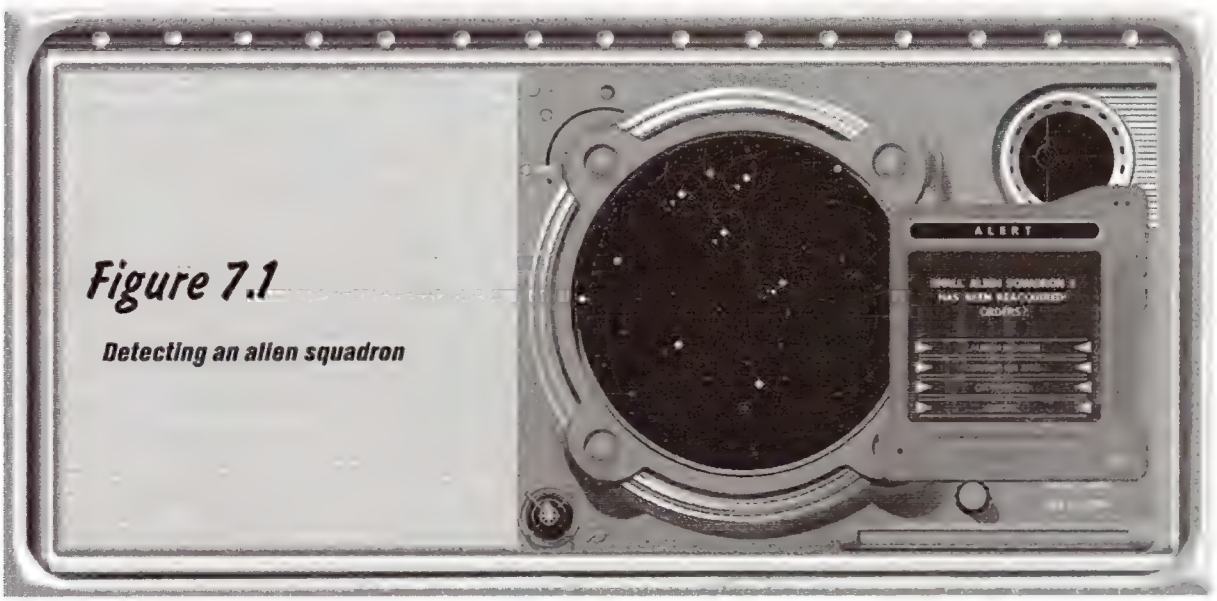


Figure 7.1

Detecting an alien squadron

The detection range of sensor systems varies depending on the system type—the more advanced the sensor system, the longer the range. Because of the vast amount of available power and the size of the sensor array, base sensors have much greater range than the

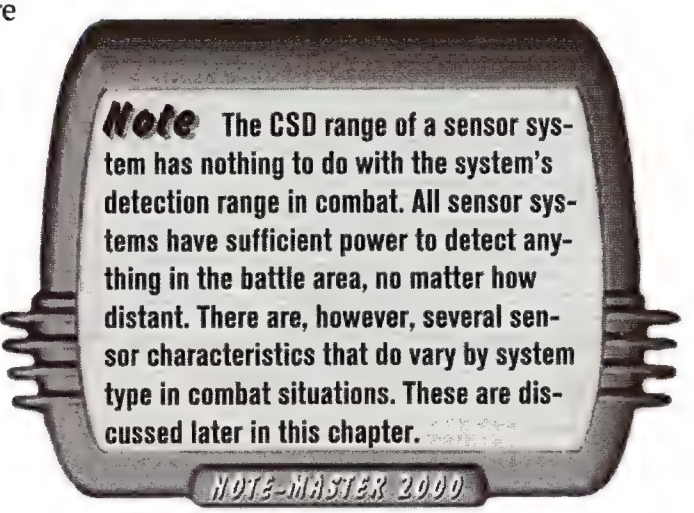
systems mounted on ships, probes, and outposts. Table 7.1 shows the detection radius (in light-years) for each sensor type.

Table 7.1: CSD detection radii for sensor systems (in light-years)

Sensor Type	Base Sensor Range	Interceptor Sensor Range	Outpost/Probe Sensor Range
Standard Sensors	.3	.15	.15
Emissions Tracking Sensors	.6	.3	N/A*
AATS Sensors	1	.5	N/A*

* Outposts and probes always use Standard Sensors.

New bases and stock interceptors are always equipped with the best sensor type available at the time they are built. If you want your existing bases and interceptors to take advantage of the latest in sensor technology, you must upgrade their systems manually.



THE STRATEGIC USE OF PROBES

Probes are cheap, versatile, and extremely useful—you would be foolish not to take advantage of them. In fact, you are unlikely to succeed without them.

You can start using probes right from the beginning of the game. During the first couple of game months, it is unlikely you'll have the means to mount an aggressive campaign against the aliens—you'll need to lie low for at least that long and build up your forces. During this passive period, Sensor Probes are useful for extending your detection range beyond that of your single base and the few outposts in the area.

Within a couple of weeks of the start of the game, you are likely to encounter several random alien incursions. Note the general area where the aliens appear. Although they often take a circuitous course to throw you off guard, repeated alien attacks in a particular region can be an indicator of the general direction of their bases and outposts. When you observe a pattern, launch a series of Sensor Probes to form a detection arc beyond your existing sensor range (see Figure 7.2). This line of probes forms an early warning system that helps you to keep the aliens at arm's length. At the very least, alien squadrons wishing to avoid detection must skirt these probes or destroy them outright, either of which buys you some time.

The nature of *Interceptor*'s strategic alien A.I. makes it dangerous to just sit around and wait for the aliens to come to you. The longer you stick to this tactic, the more aggressive

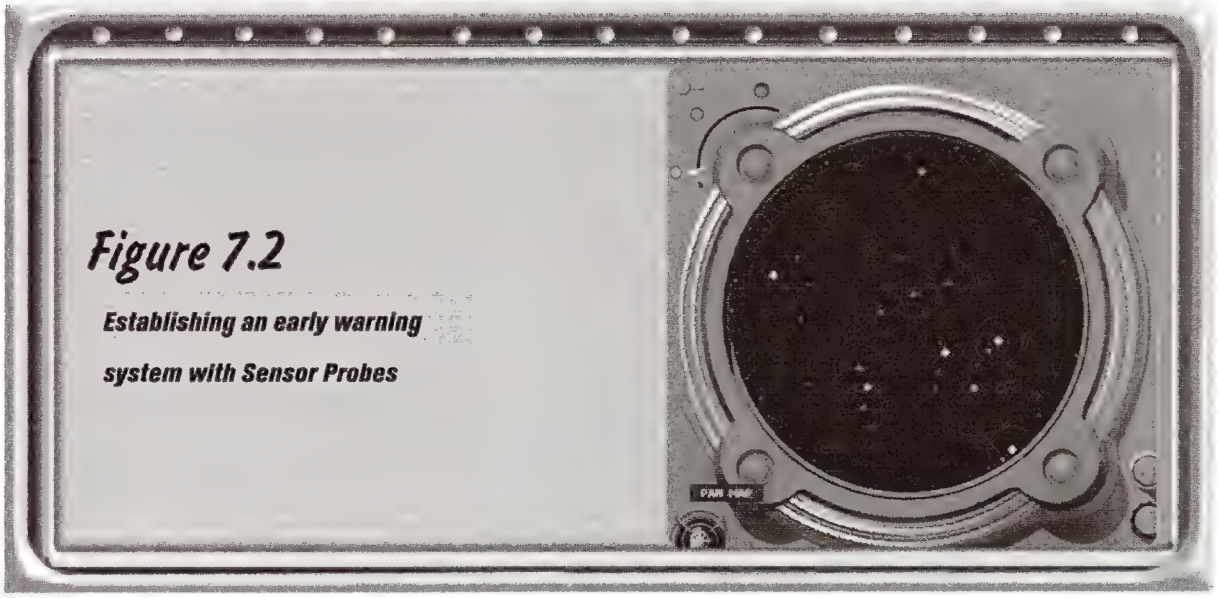


Figure 7.2

Establishing an early warning system with Sensor Probes

the aliens become until, finally, you are completely overrun—not a pleasant prospect. Once you establish a decent fleet and you feel you are ready to take the war to the aliens, it's time to employ your Sensor Probes in a different manner.

Starting with the star systems closest to your territory, start launching probes in the general direction from which you have observed the most alien traffic. Make sure that every probe you launch is within scanning range of a star system. By stepping your way out from your territory in this manner, you'll eventually start locating alien outpost systems. Once you do, you can start launching attacks on their outposts and mining platforms—assuming your ships have enough range, that is. (See Figure 7.3.)

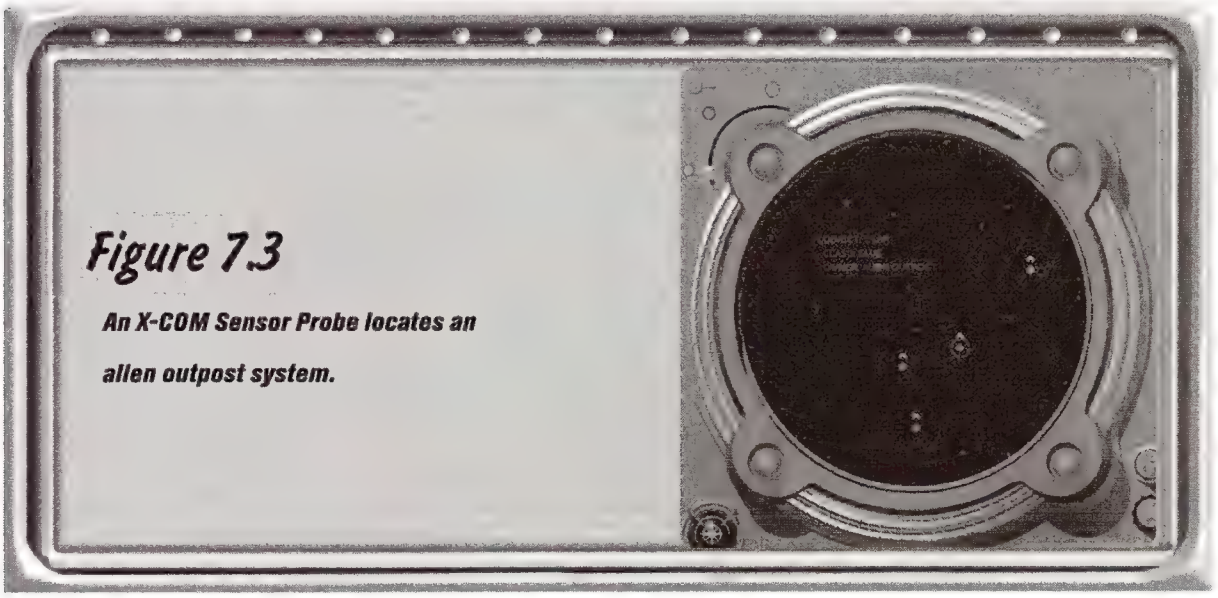


Figure 7.3

An X-COM Sensor Probe locates an alien outpost system.

Another way to find alien facilities is to track alien squadrons to their source by shadowing them with a line of probes. When an alien squadron is retreating from your territory, launch a probe along its projected path. When the aliens reach the probe's sensor ring, observe their direction again and launch another probe along the new path. (Probes are fast enough to stay ahead of any alien squadron.) It's hit or miss, but if you manage to keep track of the squadron long enough, you're bound to find a base or an outpost system eventually.

Tip **More often than not, the best direction in which to start looking for alien installations is along a line directly across the CSD from your starting position. Although starting positions are randomized every game, as a general rule the aliens start fairly close to the edge of the map exactly opposite from your initial facilities.**

TIP-O-MATIC

The only drawback of probes is their lack of longevity: Sensor Probes have a life span of four to six weeks, and Hunter Probes only last three to four weeks. Also, probes are extremely vulnerable, and aliens go out of their way to destroy them. Still, it's much cheaper to perform the bulk of your exploration with probes than it is to keep a squadron or more of interceptors in flight at all times.

X-COM PILOTS

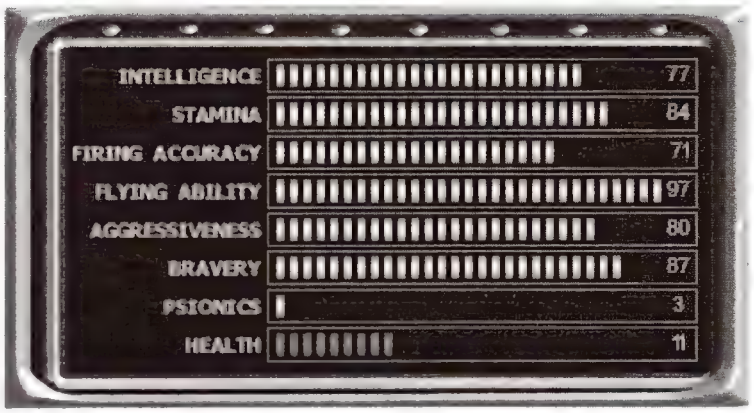
Whether the aliens are coming to you or you are going to them, a critical element in the success of your interceptor squadron—almost as critical as the ship types and their equipment loadout—is your choice of pilots. The statistics of your pilots play an important role in combat.

The following sections discuss X-COM pilots—how they are generated, how their statistics affect their performance, and how they can be improved over time.

HOW X-COM PILOTS ARE GENERATED

Interceptor generates X-COM pilots randomly (within a certain set of defining parameters). At the beginning of the game, you have five pilots, who are automatically assigned to your first base. The game also generates a recruitment pool from which you can hire new pilots to replace those who are lost in combat—or those who are a bit sub-par in performance. The recruitment pool, which generally contains at least ten pilots, is rotated on a monthly

basis to provide a constant parade of new pilots of varying skill level from which you can choose your personnel.



X-COM pilots are nothing more than the sum of their statistics. Like their alien counterparts, each X-COM pilot has a set of characteristics that defines the way they perform in combat. Many of these statistics are identical to those used for alien pilots (see Chapter 6 for details), but with different base values. The rest are unique to X-COM pilots.

SHARED STATISTICS

A number of the statistics used for alien pilots are also used for X-COM pilots. These are:

- Intelligence
- Firing Accuracy
- Flying Ability
- Aggressiveness
- Bravery
- Psionics
- Health

Intelligence A pilot's Intelligence defines how well he or she is able to analyze a battle situation and take appropriate action. Pilots with high Intelligence can select the proper weapon for the proper situation and choose the most appropriate targets to attack given the mission parameters. High Intelligence also increases the pilot's knowledge of sophisticated offensive and defensive maneuvers and their ability to improve their combat and psionic skills (Details on pilot training and advancement can be found later in this chapter.

An X-COM pilot's base Intelligence is between 50 and 100 points.

Firing Accuracy Like their alien counterparts, X-COM pilots' missile- and beam-weapon proficiency is governed largely by their Firing Accuracy. The higher this statistic, the more accurate the pilot.

Base Firing Accuracy for X-COM pilots is between 25 and 100.

Flying Ability This statistic determines the pilot's ability to control his or her interceptor in battle. The higher the Flying Ability statistic, the better the pilot. Flying Ability also interacts with Firing Accuracy (since it is necessary to control the craft well in order to get a solid target lock or to keep the enemy in the beam sights). Finally, pilots with high Flying Ability scores are more likely to be able to perform complex maneuvers.

As with Firing Accuracy, the base score for Flying Ability is 25 to 100 points.

Aggressiveness Aggressiveness is a tricky trait. Too little and the pilot is too timid to do you any good. Too much and the pilot is likely to get killed by taking foolish risks. The higher a pilot's Aggressiveness, the more likely she is to risk her life in an attempt to complete the mission goals.

Base Aggressiveness for an X-COM pilot is 25 to 100 points.

Tip When you are hiring pilots, make sure you take Aggressiveness into account. If your choice ever comes down to this trait, it is better to err on the high side than the low. No one wants a wimpy wingman.

TIP-O-MATIC

Bravery A pilot's Bravery rating determines whether he stays in the battle to the bitter end or goes running in panic when things start going against him. The lower the pilot's Bravery, the more likely it is that he'll leave the battle when the tide turns in the enemy's favor. Bravery also affects how the pilot responds to psionic attacks.

An X-COM pilot's base Bravery is between 25 and 100.

Note Pilots with low Bravery tend to turn tail and run when you launch a Nova Bomb (except in the final mission, when they are stuck in the alien universe).

NOTE-MASTER 2000

Psionics This statistic defines the pilot's resistance to and ability to generate psionic attacks. The higher the pilot's Psionics rating, the less likely she is to be affected by the Psi Blaster—and the more likely she is to be successful when using the weapon herself.

The base Psionics rating for an X-COM pilot is between 1 and 100.

Note As a general rule, wingmen tend to use Psi Blasters sparingly even if their ships are so equipped, so their Psionics rating is primarily for defensive purposes. However, the Psionics rating of the pilot you control directly affects your effectiveness when initiating Psi Blaster attacks.

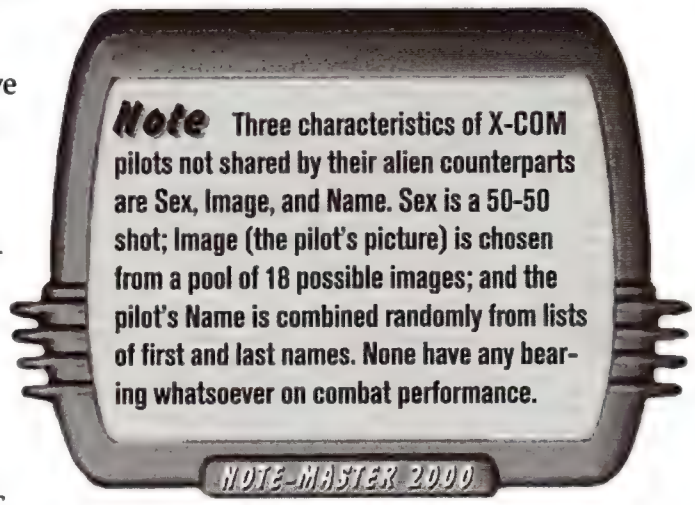
NOTE-MASTER 2000

Health Like the aliens, each X-COM pilot has a Health rating that determines how many points of damage he or she can withstand before lapsing into unconsciousness or dying. When the pilot's Health drops to zero, he or she becomes unconscious. When it drops *below* zero, the pilot dies.

Base Health for X-COM pilots is determined by adding five to a random number between 1 and 10.

X-COM-SPECIFIC STATISTICS

In addition to those statistics that they share with alien pilots, X-COM pilots have a number of unique statistics that define who they are and what they can do.



Stamina Ostensibly, the Stamina statistic listed for a pilot determines his or her ability to withstand prolonged combat. Stamina is meant to decrease over time, degrading the pilot's other abilities until he or she is able to rest and recuperate. In practice, this statistic affects very little, and should be given only cursory attention when you select new pilots.

A pilot's base Stamina rating is between 50 and 100.

Rank When a pilot is first generated, he or she is assigned a military Rank. Rank determines the recruitment cost and salary of the pilot (see Chapter 2 for details). Table 7.2 shows how rank is determined.

Table 7.2: Generating Rank for X-COM pilots

Die Roll	Rank
1-40	Rookie
41-60	Ensign
61-80	Lieutenant
81-95	Lt. Commander
96-100	Commander

Rank also serves as an indicator of the pilot's overall level of experience, and is used to modify certain other statistics. Table 7.3 shows how various ability scores are modified based on the pilot's Rank when he or she is generated.

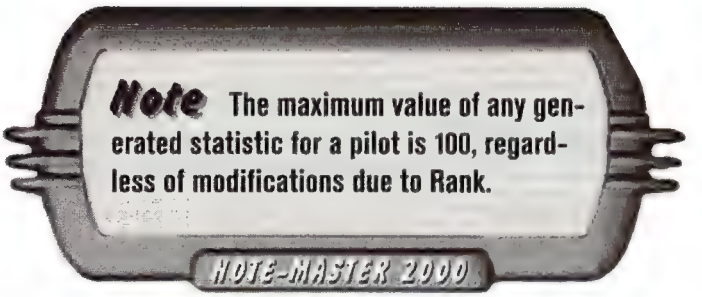


Table 7.3: Effects of pilot Rank on generated statistics

Rank	Stamina Modifier	Firing Accuracy Modifier*	Flying Ability Modifier*	Aggressiveness Modifier	Bravery Modifier
Rookie	0	0	0	-5	-5
Ensign	+3	+5*Int%	+5*Int%	0	+5
Lieutenant	+6	+10*Int%	+15*Int%	+5	+10
Lt. Commander	+9	+15*Int%	+20*Int%	+10	+15
Commander	+12	+20*Int%	+30*Int%	+15	+25

* "Int%" is the pilot's Intelligence rating taken as a percentage.

Another statistic affected by rank is Psionics—but this one's a little more complicated. A die roll is made to determine the amount added to the Psionics score for each pilot (as shown in Table 7.4).

Table 7.4: Psionics modifications by generated Rank

Die Roll	Rookie	Ensign	Lieutenant	Lt. Commander	Commander
1-10	-5	0	0	+2	+5
11-30	0	0	+2	+5	+7
31-50	0	+2	+5	+7	+10
51-75	+2	+5	+7	+10	+15
76-90	+5	+7	+10	+15	+20
91-98	+7	+10	+12	+17	+25
99-100	+10	+12	+15	+20	+40

Missions and Kills Finally, each X-COM pilot is assigned a number of Missions and Kills. These numbers are determined based on the pilot's Rank—every pilot has the minimum number of Missions and Kills required to advance to his or her current Rank. (See "Pilot Advancement," below, for details.)

> **Tip** When you start the game, go directly to the Assign Pilots mode of the Equip Ship screen and examine the statistics of your initial pilots. Compare their statistics to the base values discussed in this chapter to determine whether their abilities are up to snuff, and sack those who don't make the grade. Replace them with more qualified candidates from the recruitment pool.
>
> TIP-O-MATIC

PILOT ADVANCEMENT

Unlike alien pilots, X-COM pilots improve over time. Certain pilot abilities increase over time as a result of both experience and formal training. All increases in ability scores and rank are calculated based on the pilot's Rank which, in turn, is calculated based on his or her level of Experience.

Experience is a calculated statistic derived from the following equation:

```
Experience=(Kills/Missions)+Missions
```

"Missions" is the number of combat missions in which the pilot has participated. "Kills" is (obviously) the number of combat kills the pilot has made. What exactly constitutes a Kill is shown in Table 7.5.

Table 7.5: How kills are accumulated

Target Destroyed	Accumulated Kills
Alien base (entire base)	5 (plus all attached pods)
Enemy fighter (any)	1
Enemy freighter	1
Enemy missile (any except Fusion and Nova Bomb)	.1
Fusion Missile	.25
Large base pod	2
Medium base pod	1
Mine (any)	.25
Mining platform	5
Nova Bomb (launched by enemy)	1

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Target Destroyed	Accumulated Kills
Outpost	10
Probe (any)	.5
Small base pod	.34

A pilot's Rank progresses based on their calculated level of Experience, as shown in Table 7.6. Once the pilot achieves the Experience rating shown, he or she moves up to the appropriate rank. Note that rank progression is slower and more demanding at higher levels of game difficulty.

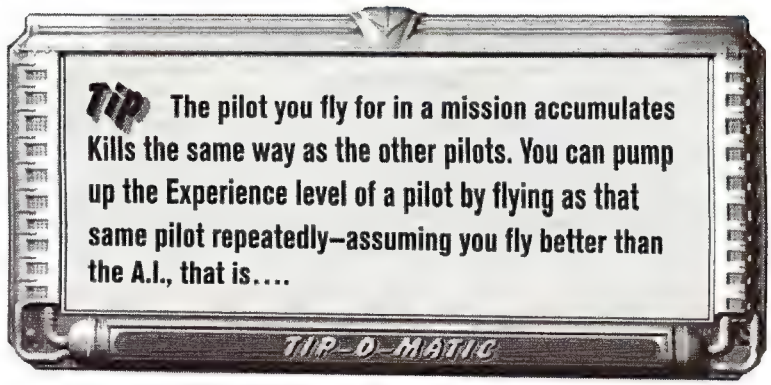
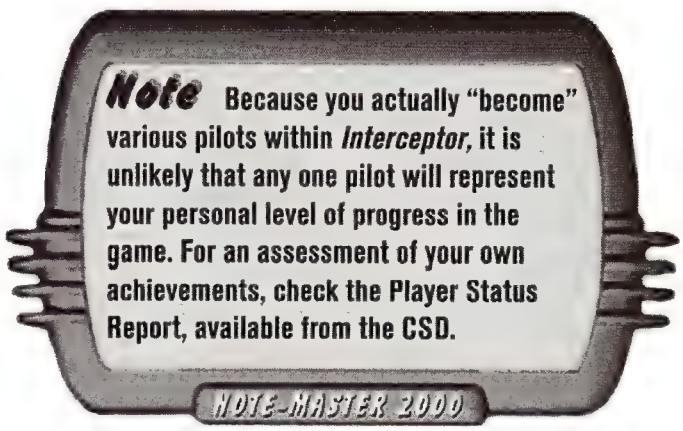


Table 7.6: X-COM pilot Rank progression

Game Difficulty	Experience Level Required to Attain the Rank of:				
	Rookie	Ensign	Lieutenant	Lt. Commander	Commander
Beginner	–	1	8	20	35
Experienced	–	2	10	24	38
Veteran	–	2	12	27	40
Genius	–	3	15	30	43
Superhuman	–	4	17	33	45

As your pilots advance in Rank, a number of their ability scores increase automatically (due to repeated combat exposure). The following abilities increase naturally over time:

- Stamina
- Firing Accuracy
- Flying Ability
- Aggressiveness
- Bravery
- Health



The first five items on the list increase with each Rank increase as shown in Table 7.3. Health increases one to five points with every increase in Rank.

FORMAL PILOT TRAINING

In addition to the on-the-job training every pilot receives when he or she is plunked into the cockpit of an interceptor and sent off to battle, pilots can undergo formal training to increase certain statistics—provided your base is equipped with a Training Module and you are willing to take the pilots out of the combat pool for a while.

To send a pilot to training, simply click the appropriate icon under the pilot's picture on the Equip Ship screen (pilots mode). (See Figure 7.4.) Up to five pilots can occupy a single Training Module at any one time.

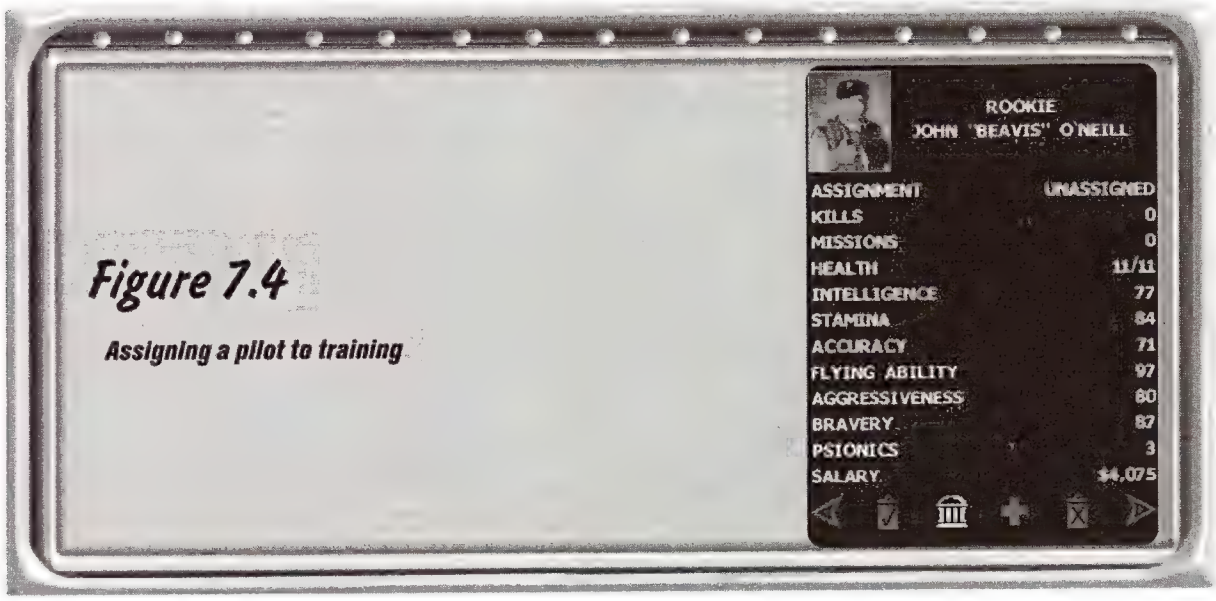


Figure 7.4

Assigning a pilot to training

The following statistics can be increased through training:

- Firing Accuracy
- Flying Ability
- Psionics

Ability score increases in all three categories are based in part on the

Note **Remember: Pilots who are in training are unavailable to fly combat missions until you bring them back to active duty.**

NOTE-MASTER 2000

pilot's Intelligence score—the higher the pilot's Intelligence, the more he or she gains from training. The following equation determines the monthly point increase:

```
Monthly Increase=(.1*Current Statistic)*Int%
```

All numbers are rounded up.

INTO THE COCKPIT

Now it's time to take a look at the game systems and strategies that are directly related to the operation of your ship. In the following sections, you'll learn about such important issues as power management, shields, and targeting systems. You'll also learn how the game applies and repairs battle damage, and how special defensive systems like the Cloaking Device and ECMs function.

POWER MANAGEMENT

One of the first things you need to understand before you go into battle is how to allocate your interceptor's power to its various systems. Every interceptor type has a built-in power plant that generates a constant amount of energy. All the ship's systems—engines, shields, weapons, and so on—draw their power from this central energy pool, which always has 100 points of power available.

The energy generated by the central power plant is divided between four general categories:

- Engine power
- Beam-weapon recharge
- Shield recharge
- Special system operation

For the most part, you'll control power allocation with the F9 and F10 keys, which set the level of weapon and shield recharge, respectively. As more power is allocated to each of these tasks, the amount of power available to the engines and special systems decreases to compensate. In other words, when you have your weapons and shields set to recharge at their maximum rate, your ship moves slower because there is less power available to the engines.

Power allocated to beam-weapon recharge goes into the "weapons capacitor," a rechargeable battery that holds up to 1000 points of power. Every time you fire a beam

weapon, its Energy Cost is subtracted from the power in the weapons capacitor. (See Chapter 5 for an explanation of beam-weapon Energy Cost.) Once all the power in the weapons capacitor is depleted, your beam weapons go off-line.

> **Note** To constantly monitor the level of power allocated to each system type you must be in forward cockpit (F1) view.
>
> NOTE-MASTER 2000

Power allocated to shield recharge goes directly to the shield generator. Interceptor shields are always active (assuming there is a working shield generator on the ship), but any strength depleted by battle damage is only replaced if the shields are set to recharge.

Both beam weapons and shields have five recharge settings to choose from. The higher the setting, the faster the recharge rate—and the higher the energy drain. Table 7.7 shows the number of points per second by which beams and shields are replenished at each recharge setting.

Table 7.7: Beam-weapon and shield recharge rates (in points per second) at each recharge setting

Recharge Setting	Beam Weapons	Shields
A (0%)	0	0
B (25%)	7	1
C (50%)*	10	2
D (75%)	15	3
E (100%)	22	5

* Default setting at the beginning of a mission

Engines basically get whatever energy is left over in the power plant after the shields and weapons draw off their power. No matter how much power you allocate to shields and weapons, however, the engines never drop below 25% power (except when certain special systems are active, as described in the next section).

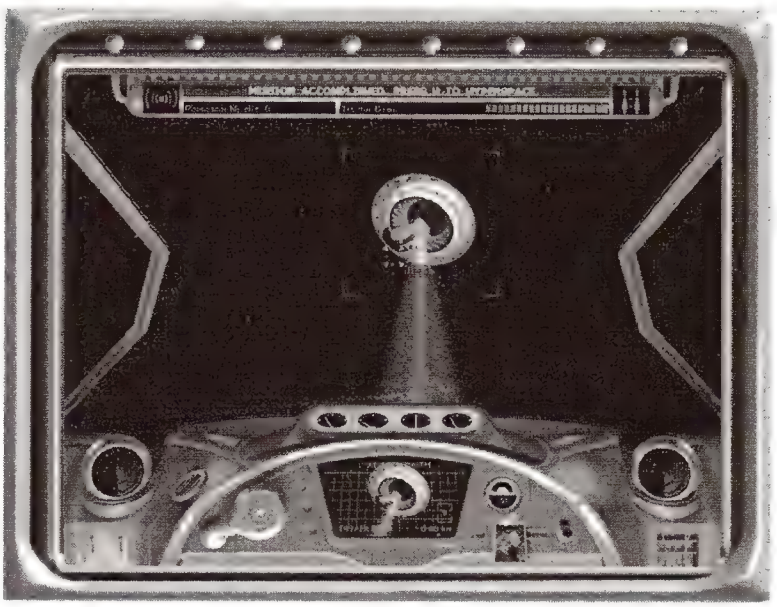
> **Tip** I find it quite effective to set both beam and shield recharge to maximum about 90% of the time. The interceptors, when equipped with the proper engines, are plenty fast even at 25% capacity–just goose the afterburners if you need a little kick. The only times I set the shield and weapon charge at a lower rate is when I have to get somewhere as fast as possible and there are no enemies around.
>
> TIP-O-MATIC

SPECIAL SYSTEMS

Special systems, such as the Cloaking Device, ECM generators, and so on, also draw power from the central power plant. As a general rule, these devices use up far more power than is consumed by weapon and shield recharging. In fact, some special systems draw so much power that they impose a limit on how high you can set your shield and weapon recharge rates. Depending on your power allocation, a special system can even stop your interceptor dead in its tracks due to high power consumption.

The power requirements for each special system are described in the following sections.

Tractor Beams Tractor Beams are similar to beam weapons in function, but they require far more power. It takes 33 points of energy to sustain a Tractor Beam. As long as the beam is active, a full third of your power plant's energy is unavailable for other systems. Power is primarily drawn from the engines—if you have your beam and shield recharge rates set at a high level, activating the Tractor Beam is likely to bring your ship to a grinding halt.



ECM Pods ECM Pods consume power in the same manner as Tractor Beams, but at a lower rate. As long as your ECM jammer is active, it draws 25 points of power from the ship's power plant. While this drain isn't as severe as that of the Tractor Beam, you still have to watch your beam and shield recharge levels if you want to retain enough power to maneuver.

Cloaking Device The Cloaking Device is the biggest energy hog of all. When active, it draws 50 points of energy from the power plant—that's half your power down the tubes. In addition, the cloak also draws power from your weapons capacitor at a rate of 5% per second. This means that, at maximum weapons capacitor charge, you can only remain cloaked for 20 seconds (assuming a weapons recharge rate of 0%). Obviously, this device should only be used sparingly.

Afterburners The Afterburners consume energy, but they don't draw it from the power plant. Instead, they draw their energy directly from the weapons capacitor. Every second the afterburners are engaged they consume 50 points of weapons capacitor energy.

> ***Note*** **Other special systems, such as Vector Control Thrusters and the Ship Damage Control Computer, operate off of their own self-contained power sources and do not consume any power plant energy whatsoever.**
>
> NOTE-MASTER 2000

TARGETING SYSTEMS

Every interceptor must be equipped with a sensor/targeting system. These systems not only provide sensor detection capabilities in hyperspace (that is, on the CSD map), they also provide the means by which you lock your missile weapons onto a target in combat.

Besides the fact that certain weapons require advanced targeting systems in order to function, there are two major factors that differ from one system to the next:

- **Lock Range:** The maximum range at which you can achieve a target lock. (This is always higher for large targets such as mining platforms, outposts, and bases.)
- **Lock Time:** The number of consecutive seconds a target must remain within the target-lock circle before you achieve a lock.

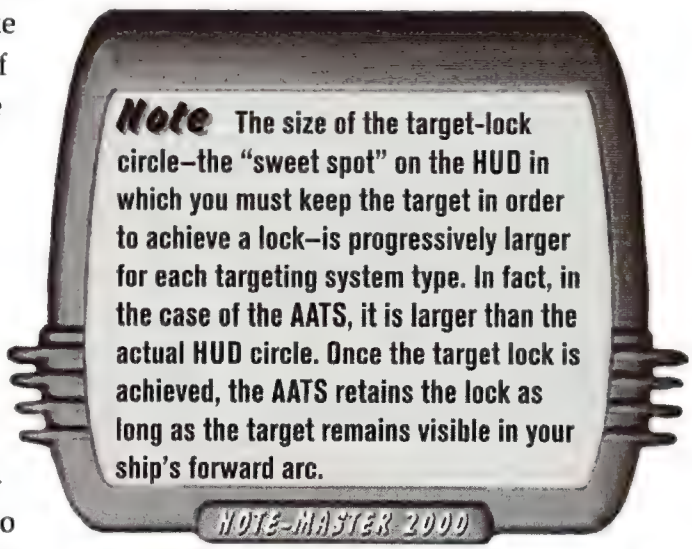
Table 7.8 shows the statistics for each targeting system type.

Table 7.8: Lock ranges and times for targeting systems

Targeting System	Lock Range (Small Targets)	Lock Range (Large Targets)	Lock Time (Seconds)
Standard	3 km	5 km	2.5
Emissions	4 km	6 km	2.0
AATS	5 km	7 km	1.5

ACHIEVING TARGET LOCK

When attempting to lock onto a target, you must keep the target in the defined target-lock circle for a number of consecutive seconds (as defined in Table 7.8). As the system attempts to lock onto the target, an intermittent tone and a visual cue count off the progress. When a lock is achieved, a solid tone sounds and the target-lock circle changes to indicate a positive lock. If the target drops out of the circle during the lock sequence, the lock time starts counting backwards. Should the target come back into the circle, it starts counting up again from the current time count.



Confusing? Not really. Say, for example, your interceptor is equipped with an Emissions Targeting System, and you are attempting to lock onto a target. You have the ship in your target-lock circle for 1.5 seconds, but it jinks to the side and out of the circle. At this point, the targeting system starts counting backwards. In half a second, you get the target back in the circle. The targeting system starts counting up again—but from one second, *not* from zero. That means you only have to keep the target in the circle for an additional second in order to achieve a lock.

EFFECTS OF SPECIAL DEFENSIVE SYSTEMS

The normal targeting sequence is affected if you use either of two special defensive systems—ECM pods and the Cloaking Device. These systems affect both the locking capabilities of targeting systems and the tracking systems of missiles.

ECMs The effects of ECMs on targeting and missiles are as follows:

- ECMs increase the lock time required for each targeting system type. The increase for standard ECM is approximately half a second, while the increase for advanced ECM is approximately a second.
- Standard ECM has a 10% chance of causing a missile to lose tracking with .25 kilometer of the ship (1 kilometer for base-mounted ECM systems).
- Advanced ECM has a 25% chance of causing a missile to lose tracking within .5 kilometer of the ship (2 kilometers for base-mounted ECM systems).

Cloaking Device The Cloaking Device renders ships invisible both to the naked eye and to sensor/targeting systems. Even when cloaked, however, ships have a chance of being picked up on sensors (the better the sensor system, the better the chance). With every passing second, the chance of detecting a cloaked object gets cumulatively higher.

There is also a percentage chance that a missile homing in on a ship will lose tracking when the target vessel engages its Cloaking Device. Table 7.9 shows the percentage chance for each game difficulty level.

Table 7.9: Percentage chance of disrupting missile tracking when the Cloaking Device is engaged

Difficulty Level	% Chance to Disrupt Missile Tracking
Beginner	50
Experienced	45
Veteran	40
Genius	35
Superhuman	30

THE DAMAGE ALLOCATION SYSTEM

Before you enter battle, it doesn't hurt to have some understanding of how the damage allocation system works. Every time you score a hit—or the enemy scores a hit on you—a lot of factors come into play. The following sections describe what makes damage allocation tick.

HOW SHIELDS AND ARMOR WORK

When compared to the amount of damage enemy weapons can inflict, the hull integrity of X-COM ships is quite fragile indeed. Luckily for you, armor and shields are available to increase the durability of your ships.

Note The number of additional hit points provided by each armor and shield type is listed in Chapter 5.

NOTE-MASTER 2000

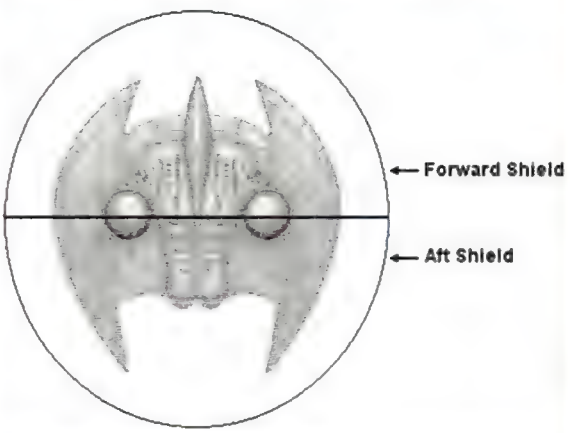
Shields are your first line of defense against enemy weapons fire and other damage. When a shield generator is active, it generates a protective energy "bubble" around the ship. This bubble is divided into two sections—fore and aft—which provide equal shielding protection to the front and back of the ship respectively. The shield halves are divided at the midsection of the ship (see Figure 7.5). All hits coming in from the front are applied to the forward shield section; all hits coming in from the back are applied to the aft.

Note When an incoming weapon hits the dividing line between the front and rear shields, the full damage from the hit is applied to *either* the front *or* the rear shield. (It's a 50-50 chance either way.)

NOTE-MASTER 2000

Figure 7.5

Shielding diagram for a Firestar Interceptor



Hits that make it through the shields are applied to the ship's armor. Like shields, armor is divided into two sections: fore and aft (see Figure 7.6). Each section provides the

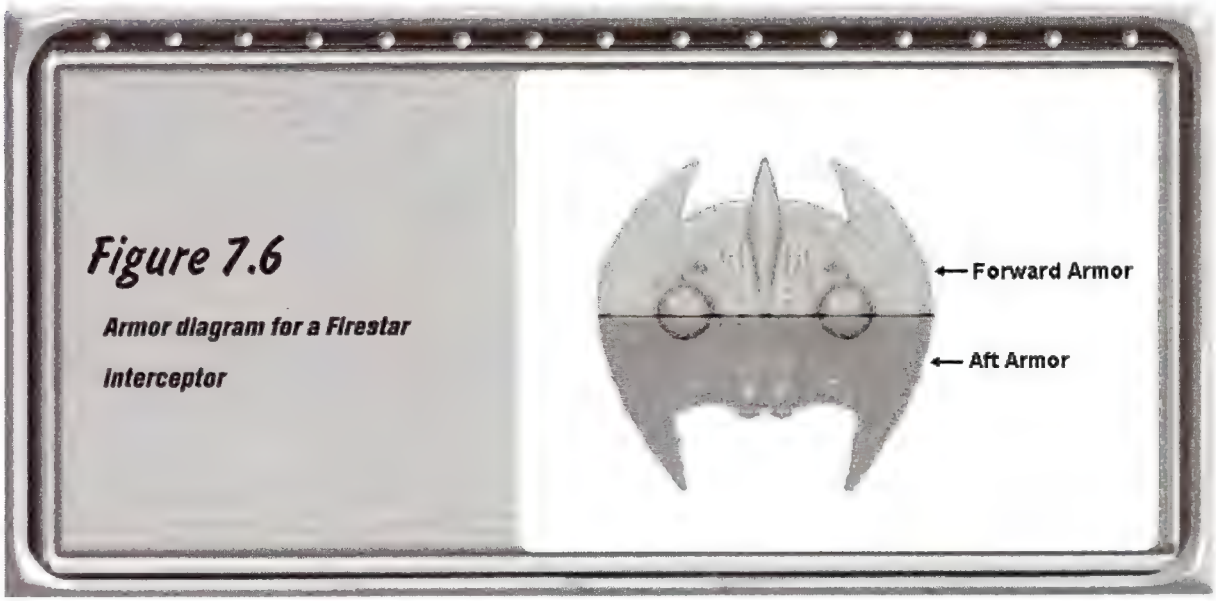


Figure 7.6

Armor diagram for a Firestar Interceptor

full hit-point protection listed for the armor type installed. Again, the damage is applied based on whether it hits the front or rear of the ship.

In most cases it is only when both the shields and the armor are down that hits are applied to the ship's hull and internal systems.

Tip Even though the sheer weight of armor plating slows your ships down a bit, you are much better off if you have armor than if you don't.

TIP-O-MATIC

THE DAMAGE ALLOCATION HIERARCHY

Every time damage is scored against a target, an intricate system of damage allocation comes into play. Figure 7.7 illustrates the damage allocation process in flowchart form.

Note Each time a weapon hits a target, the game applies a random modifier to the damage. This modifier doesn't change the damage by more than a few points either way, but it is enough to randomize weapons effects so that it doesn't always take the same number of shots to destroy the same type of target.

NOTE-MASTER 2000

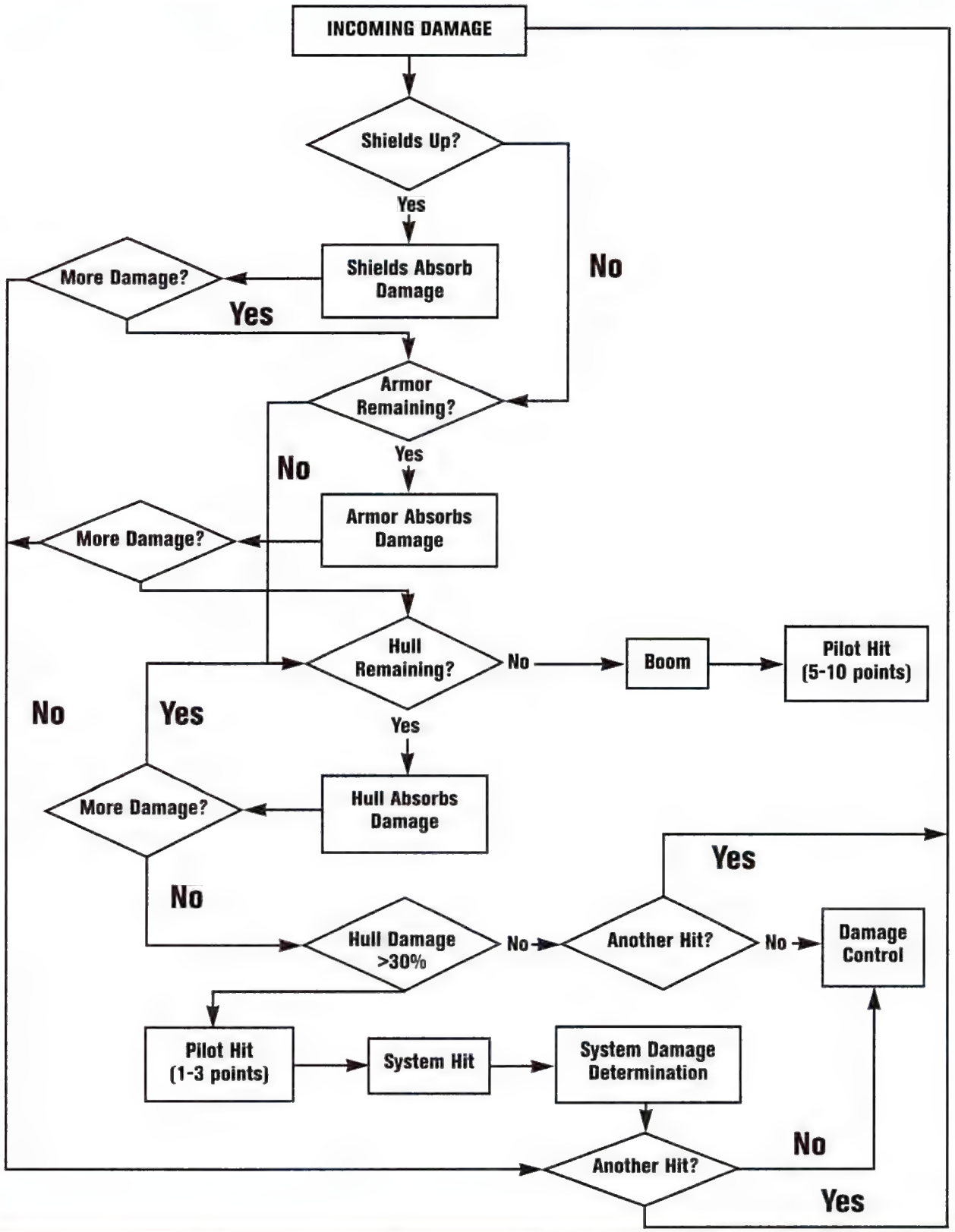
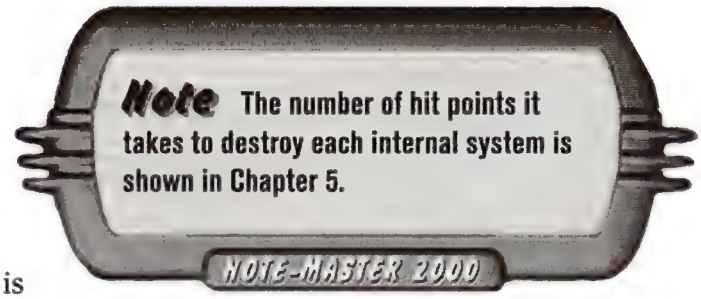


Figure 7.7 *The damage allocation process*

INTERNAL DAMAGE



When internal damage is scored against a ship, the game distributes the damage to the various systems mounted on the ship. Once the ship's hull hit points drop below 70% of full strength, 30% of all incoming damage is applied to internal systems. (The remaining 70% is applied to the hull itself.) Table 7.10 shows the system the game uses to allocate damage to internal systems.

Table 7.10: How damage is allocated to internal systems

Die Roll	System Damaged*
1-10	Wing/outboard beam weapon**
11-25	Wing/outboard missile weapon**
26-35	Centerline beam weapon**
36-50	Centerline missile weapon**
51-60	Shield generator
61-70	Maneuvering system
71-80	Sensor/targeting system
81-90	Engines
91-95	Hyperdrive
96-98	Special system
99-100	No damage

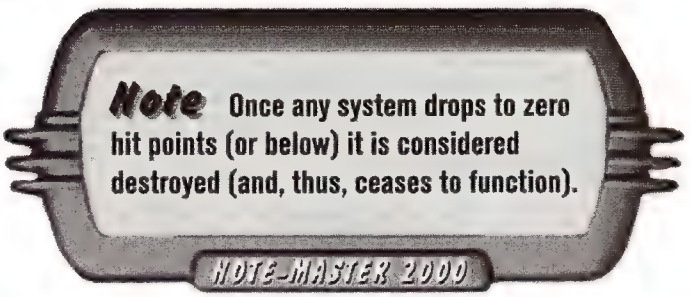
* If no system of the type rolled is available, the result is "no damage."

** If there are multiple systems of this type, there is an equal chance that any one of the available systems will be the one that receives the damage.

When an internal system is damaged or destroyed, it affects certain aspects of your ship's flight and/or combat performance. As long as the system retains at least 50% of its original hit points, it continues to function normally. As soon as the system's hit points drop *below* 50%, the effects are as follows.

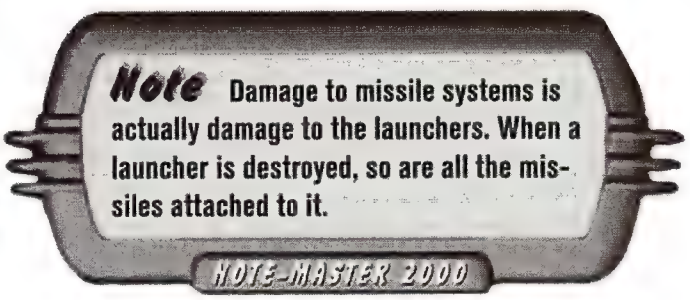
Wing/Outboard or Centerline Beam Weapon Damage

- When the weapon's hit points are between 26% and 50%, the weapon fires at half of its normal rate of fire.
- When the weapon's hit points are between 1% and 25%, the weapon cannot be fired.



Wing/Outboard or Centerline Missile Weapon Damage

- When the weapon's hit points are between 26% and 50%, the weapon fires at half of its normal rate of fire.
- When the weapon's hit points are between 1% and 25%, the weapon cannot be fired.

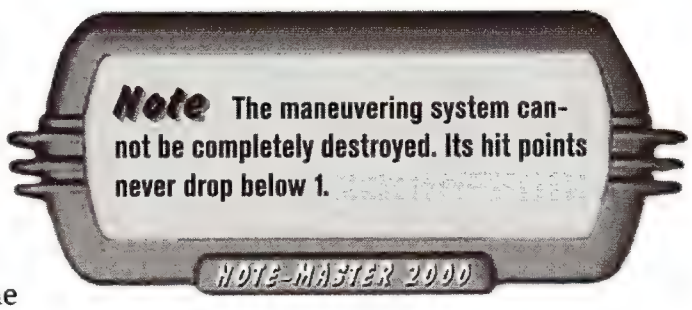


Shield Generator Damage

- When the shield generator's hit points are between 26% and 50%, the shields recharge at half their normal rate.
- When the shield generator's hit points are between 1% and 25%, the shields lose all their current charge, and cannot be raised.

Maneuvering System Damage

- When the system's hit points are between 26% and 50%, the ship's maneuvering becomes sluggish and unresponsive.
- When the system's hit points are between 1% and 25%, the ship continues on its current course and cannot be steered until the system repairs itself.



Sensor/Targeting System Damage

- When the targeting system's hit points are between 26% and 50%, missile targeting time is increased by half. Blips in the Sensor Displays "scramble" for one to five seconds at random intervals once every 30 seconds (the blips move and change color nonsensically). The entire HUD display disappears for one to three seconds at random intervals. The Target Tracking and Target Information display portions of the MFD turn to static for one to five seconds at random intervals.
- When the targeting system's hit points are below 25%, sensors are blank, the HUD disappears, and the Target Tracking and Information modes of the MFD are nothing but static.

When the targeting system is destroyed, missiles cannot be locked on targets, and beam weapons must be targeted manually (no lead reticle appears). The Tracking Tracer Cannon acts as a normal Tracer Cannon.

Engine Damage

- When engine hit points are between 26% and 50%, maximum thrust is 50% of normal (and all settings below maximum are also halved).

Note Even if the ship's engines are damaged or destroyed, the power distribution between systems is not affected. In other words it is only the engine—*not* the power plant—that is damaged.

NOTE-MASTER 2000

- When engine hit points are between 15% and 25%, maximum thrust is 25% of normal (and all settings below maximum are similarly reduced).
- When engine hit points are between 1% and 14%, the ship cannot move (except using hyperdrive or Vector Control Thrusters, if available).

Hyperdrive Damage

- When the hyperdrive's hit points drop below 25%, the hyperdrive is non-functional.

Note The hyperdrive cannot be completely destroyed.

NOTE-MASTER 2000

Special System Damage–Cloaking Device

- When the Cloaking Device's hit points drop below 50%, the cloaking device is non-functional.

Special System Damage–Vector Control Thrusters (VCTs)

- When the VCTs' hit points drop below 25%, the VCTs are non-functional.

Special System Damage–Ship Damage Control Computer

- This system continues to function at full efficiency until it is utterly destroyed.

Special System Damage–ECM Pod

- When this device's hit points drop below 50%, it is non-functional.

HOW DAMAGE IS REPAIRED

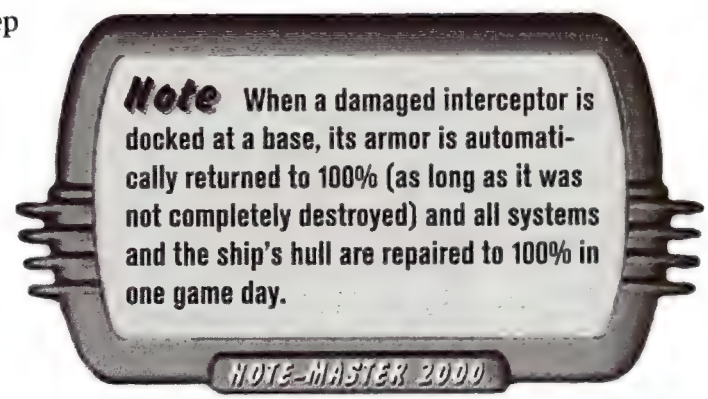
All ships—both alien and X-COM—have self-repairing capabilities. In other words, both the hull and the ship's internal systems repair themselves during battle. A set number of hit points is restored every second during combat. (Repair rates are much higher when the ship is docked at its home base.) Table 7.11 shows the repair rate (in points per second) for both systems and hulls during combat.

Table 7.11: In-flight repair rates of ship hulls and systems

Ship System	In-Flight Repair Rate (points per second)
Hull	3
Weapons/Systems	2

There are a number of rules to keep in mind regarding in-flight damage repair:

- Systems that are completely destroyed cannot be repaired.
- Armor is not subject to self-repair in battle.



- Repair rates are doubled on vessels equipped with a Ship Damage Control Computer.

SPECIAL WEAPONS SYSTEMS—HOW THEY WORK

Although most of the weapons in the game follow the damage hierarchy shown in Figure 7.7, there are several exceptions. The following four weapons follow a slightly different set of damage guidelines.

Phase Cannons Phase Cannons are extremely powerful and effective weapons that have an increased effect on shielded targets. When damage from Phase Cannons is applied to shields, the damage yield is increased to 150% of normal. There's no better way to whittle away at an enemy target's shields than by using Phase Cannons.

Permeator Missiles Permeator Missiles have a different but equally powerful sort of effect on shielded targets than Phase Cannons. When a Permeator Missile hits a shielded target, half of its damage is applied to the shields and the other half is applied to armor, hull, or internal systems (whichever is next in line for damage). Against heavily shielded targets, Permeator Missiles are second to none in effectiveness. A ship equipped with both Phase Cannons *and* Permeator Missiles is a force to be contended with.

> **Tip** **Once you start encountering alien Shade fighters on a regular basis, all of your interceptors should be equipped with Phase Cannons. This is by far the best weapon to use against the Shade's Accumulator Shields.**
>
> TIP-O-MATIC

Enveloping Fusion Torpedoes

As far as the damage hierarchy goes, Enveloping Fusion Torpedoes follow the same allocation rules as most normal missile weapons. The thing that makes this weapon special is that

it is, for all intents and purposes, omni-directional. Instead being applied to the shield or armor section where it impacts, the explosive strength of this missile is applied equally to both the fore and aft sections of the shields or armor.

Tachyon Pulsers Tachyon Pulsers are extremely specialized weapons that are designed for a single purpose: disabling enemy ships. As such, all the damage from each Tachyon Pulser blast is applied *exclusively* to the target's shields and/or engines. Once both the shields and the engines have been destroyed, the target is disabled and can be captured.

Tip Enveloping Fusion Torpedoes are great against fighters, and not too shabby against freighters either. However, against larger targets (like outposts and bases) the missile's explosive strength is insufficient to cause any appreciable damage to the larger objects' powerful shielding systems.

TIP-O-MATIC

Psi Blasters The Psi Blaster is the most unique weapon in the game. It is unlike any other weapon in that it inflicts absolutely no physical damage on any target. Instead, it affects the mental state of the pilot in the target vessel, with varying results.

The Psi Blaster is targeted in the same way as any other beam weapon. Unlike other weapons, however, the Psi Blaster is linked with the mind of the pilot who is firing it; its effectiveness is determined, in part, by the firing pilot's Psionics characteristic. The weapon's effectiveness is also affected by the *target* pilot's Psionics rating and the type of shields on the target ship.

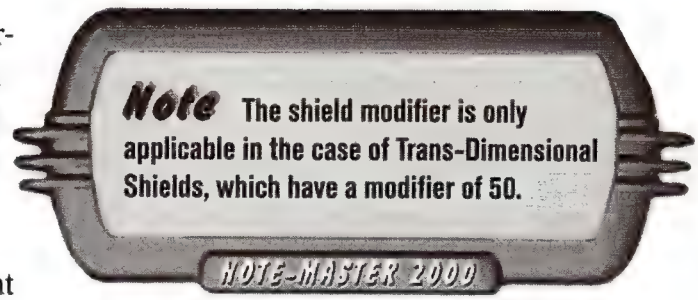
Tip It is absolutely essential that you capture ships and that means equipping some of your ships with Tachyon Pulsers. Just remember to remove the Tachyon Pulsers when you don't intend to capture ships. Because of their specialized nature, Tachyon Pulsers are pretty much useless against large targets (like bases) and are absolutely useless against small targets like missiles, mines, probes, and Drones.

TIP-O-MATIC

The following equation determines the effect of a Psi Blaster shot when it connects with its target:

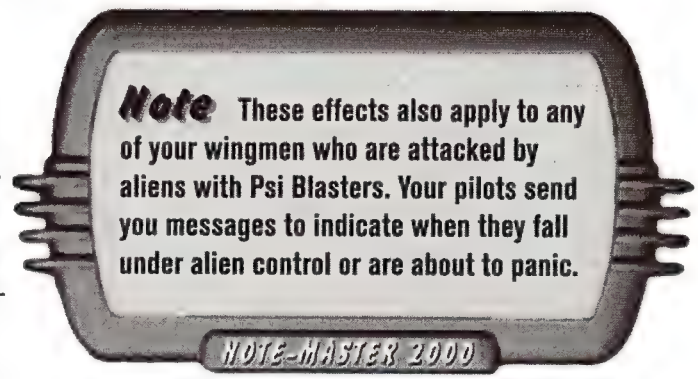
```
% chance for effective hit=10+(attacker's Psionics-target's
Psionics)-shield modifier %
```

This equation takes into account the target's resistance to the attack, as well as the attacker's proficiency, but still allows a meager chance of success for the psionically challenged. For example, if the attacker has a Psionics rating of 75 and the target pilot has a Psionics rating of 30, the target's resistance (30) is subtracted from the attacker's proficiency (75), leaving 45. This is added to the base of 10, giving the attacker a 55% chance of success.



There are three possible effects that can result from a successful Psi Blaster hit:

- **Target pilot is controlled:** The pilot falls under your control. You can give the controlled pilot any orders you can give one of your own wingmen.
- **Target pilot goes berserk:** You don't control the target pilot, but he goes temporarily insane, flying erratically and firing his weapons indiscriminately.
- **Target pilot panics:** You don't control the target pilot, but he enters a state of panic, immediately turning tail and running out of the battle area.



Which of these three effects takes place is determined by the Psi Attack Effectiveness, a number that is determined by following equation:

```
Psi Attack Effectiveness=100-target's Bravery
```

The result of this equation is evaluated as shown in Table 7.12.

Table 7.12: Determining the results of a successful Psi Blaster attack

Psi Attack Effectiveness	Result
1-39	Target pilot panics
40-79	Target pilot goes berserk
80-100	Target pilot is controlled

After the results of the psionic attack are evaluated, the game decides how long the effects last. The duration of the Psi Blaster's effect depends on the target pilot's Mental State, which is determined by the following equation:

```
Mental State=(Intelligence+Stamina+Bravery)/10
```

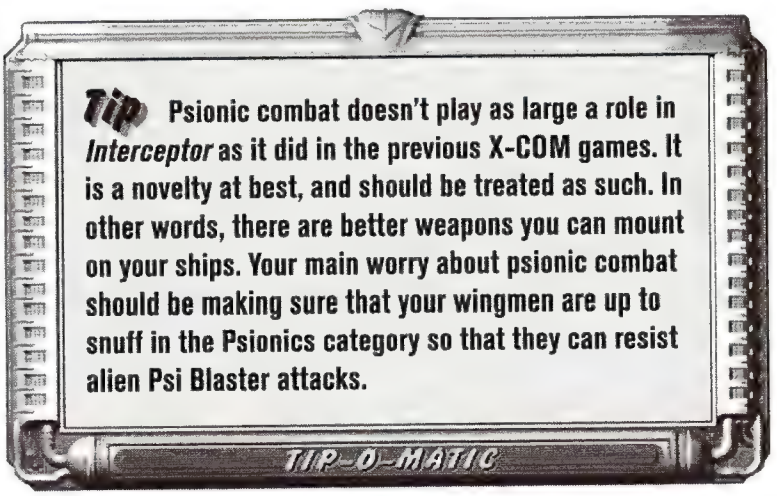
The results are evaluated as shown in Table 7.13.

Table 7.13: Determining the duration of Psi Blaster effects

Pilot's Mental State	Duration of Psi Blaster Effects (seconds)
>19	30
10-19	60
1-9	90
<1	120

The following rules also apply in psionic combat:

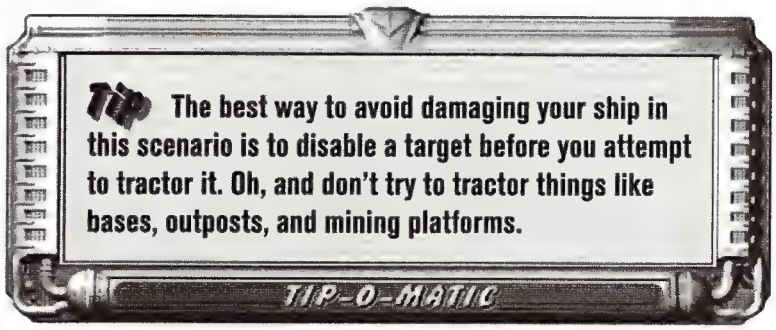
- Once a pilot has been affected by a successful Psi Blaster hit, subsequent hits from a Psi Blaster have no effect until time has expired on the original hit and the pilot is once again in control of his or her faculties.
- Alien ships that are under your control appear on your sensors as friendly blips.
- When your wingmen are under alien control, they appear as enemy blips on your sensors.



- Your level of Psi Blaster attack effectiveness is determined by the Psionics statistic of the pilot for whom you are flying.
- Alien Psi Blaster attacks have no effect on the pilot you control.
- The Psi Blaster has no effect on bases, outposts, or mining platforms.

OTHER SOURCES OF DAMAGE

In addition to hits from weapons and explosions, collisions and misuse of the Tractor Beam can also cause damage. In a collision, the amount of damage inflicted to each object in the collision is based on the force of impact. The harder you hit something, the worse the damage.



When it comes to Tractor Beam damage, there are two factors to consider. One is the relative mass of the two objects in the Tractor Beam tug-of-war, and the other is the strength of each object's engines (if any). To make a long story short, if you are attempting to tractor an object that is more massive or more powerful than your ship, you are going to take damage. If your ship is bigger and the target attempts to escape, the *target* takes copious amounts of damage.

All damage in a Tractor Beam tug-of-war is applied to the Tractor Beam itself, the engines, and the hull of the weaker ship.

FLIGHT SCHOOL

It's time for X-COM Piloting 101!

Now that you're clear on how the basic combat systems work, it's time for a little combat training. The remainder of this chapter discusses a variety of topics related to survival in the cold, cruel void of space.

As you become more adept, you'll no doubt develop your own unique style of combat. Through trial and error over the course of the first ten or so missions, you'll discover tricks and techniques that work for you, either through personal experience or by observing the techniques used by your wingmen. You'll also develop a feel for how the aliens operate, and you'll come to know what to expect of each alien species and ship design. In the meantime, here are a few basic combat strategies and techniques to get you started.

Alien Ship Combat Characteristics

Chapter 6 describes the basic capabilities of each of the alien fighters you encounter throughout the game, but what isn't revealed is how the aliens use the abilities of each craft to their best advantage. The following lists some of the combat tactics you can expect from each type of alien craft.

- Wraiths are the weakest type of alien craft, and some alien pilots recognize the craft's inherent flaws. Sectoid pilots, when pursued by an attacker they are unable to shake, often turn the Wraith around and fly it backwards, firing at you as you pursue. If you ever see a Wraith come to a brief stop when you are pursuing it, prepare to be fired upon.
- Of all the alien craft you fight, Spectres are probably the most predictable. Although capable of some advanced maneuvers, they mostly bank and turn very much like your own interceptors. Their most dangerous feature is their forward triple-beam mount. When a Spectre comes at you head-on for a game of chicken, you'd be wise to pull out first or throw all your power into the front shields.
- Phantasms make fierce enemies. Their most annoying combat characteristic is the highly accurate, 360-degree beam mount on the top of the ship that seems to take out the lion's share of incoming missiles. As dangerous as it sounds, the best way to combat this craft is to fight from close range.
- Shades are the most dangerous alien craft of all. With their huge arsenal of weapons and large complement of special systems, they are hard to match. One of their favorite tactics is to remain cloaked until they are right in front of you, decloak and unleash their weapons at point-blank range, then cloak again before you know what hit you. Ironically, this tactic is also the Shade's biggest weakness. For a couple of seconds after its Cloaking Device disengages, the Shade's Accumulator Shields do not function. If you can manage to unleash a full-power barrage of missiles and beams during this brief window of opportunity, you can stop the Shade dead in its tracks.
- More on the Shade: Once the Accumulator Shields have been reduced to zero, there is a brief period of time before the shields begin to regenerate. During this time, the Shade is vulnerable to all weapons fire. Watch for this opportunity and always take advantage of it.

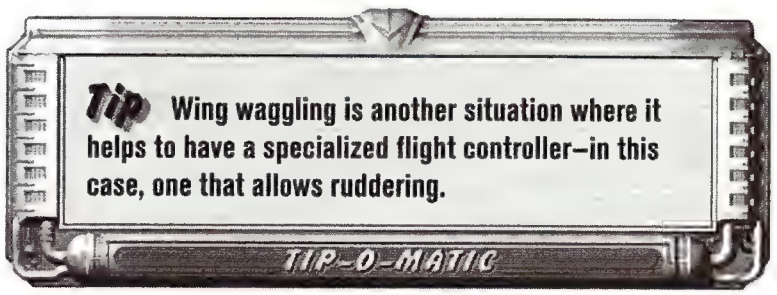
COMBAT FUNDAMENTALS

The following sections cover a variety of simple techniques that can go a long way toward helping you overcome the challenges you'll face in battle.

AVOIDING ENEMY FIRE

In the midst of a hot firefight, the last thing you want to do is hold to a straight course and hope the storm passes. Flying in a straight line—or even in smooth, regular arcs—is the best way to get yourself killed if there are a large number of enemy ships around. There are a couple of ways you can minimize damage in these situations:

- **Vary your course.** When you are pursuing enemy craft or attempting to make it from point A to point B, don't fly in a straight line. Instead, meander along your course, bobbing and weaving left and right, and occasionally flying vertical and lateral loops. This tends to throw off your pursuers.



- **Waggle your wings.** When you're taking fire from behind, roll your craft in 45-degree arcs, alternating sides. This prevents the enemy from easily matching your aspect for optimum firing accuracy.

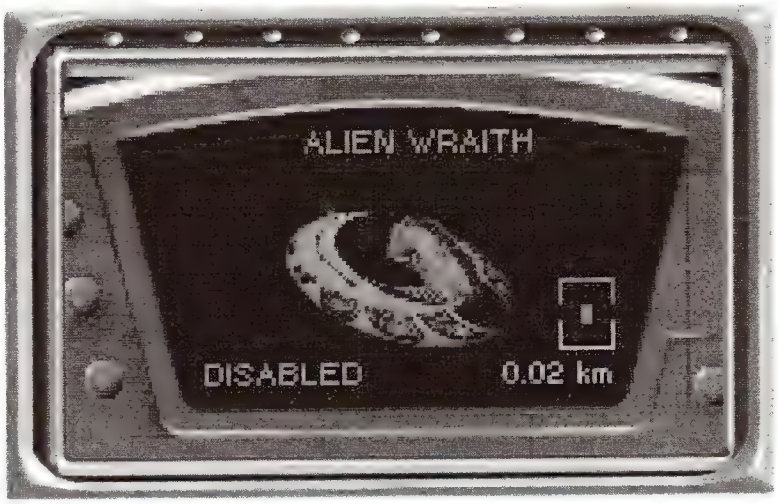
- **Use Vector Control Thrusters.** Once you have VCTs available, all bets are off. This handy device allows you to jink your ship up and down and slide left and right so quickly that the aliens will be hard-pressed to hit you with beams and frustrated into a frenzy when they try to get a missile lock.

CAPTURING ALIEN SHIPS

By now, you know that capturing alien ships is imperative if you're going to complete the game. This isn't always easy, especially with stronger enemy ships. Here are a couple of pointers to get you started:

- **Soften them up first.** Tachyon Pulsers take a tremendously long time to disable a target. This is because the weapon must first take down the shields; only then can it damage the engines. To avoid prolonged engagements, use conventional weapons to weaken the target's shields before you start using

the Tachyon Pulser. (Phase Cannons are ideal for this task.) Once the shields are down, the rest is a piece of cake.



- **Tell your wingmen to back off!** Nothing is more frustrating than whittling a target down to the point where it's almost disabled only to have one of your gung-ho wingmen swoop down and vaporize it. When you're trying to capture an alien ship, constantly warn your wingmen to ignore it, and send them home if necessary to prevent the target's inadvertent destruction.

> **Tip** When using this tactic, be careful not to overdo it—a few stray shots with the conventional weapons and you could end up turning your hard-won prize into space dust.
>
> TIP-O-MATIC

- **Try killing the pilot.** Did you know that it is possible to disable a ship even if you don't have Tachyon Pulsers? Pursue an alien ship and keep shooting at it until you start doing some hull damage. At that point, stop firing and continue to pursue. When the target regenerates a bit, start shooting again until you do a bit more internal damage. Continue this pattern long enough and—with a little luck—you'll inflict enough damage to kill the target ship's pilot. A ship with a dead pilot is considered disabled, and is counted as captured if you tow it away or win the battle with that ship still intact.

> **Tip** For the most part, you don't need to use Tractor Beams to capture ships. If you are capable, you should simply disable the alien ships you want and win the battle. Only use the Tractor Beam to tow away a disabled target if you feel there is absolutely no way you can win the battle.
>
> TIP-O-MATIC

CLOSING ON TARGETS

Earlier in this chapter, you were advised to keep your shield and weapons charges at full power most of the time. This is not a bad idea, as it increases your survivability quite a bit at the cost of a nominal amount of engine power. The only problem is that sometimes you just can't catch up to the faster aliens without an extra boost.

If you find that the enemy ship you are following is remaining at a constant distance, you don't necessarily have to give up shield and weapon power to catch it. Instead, use short bursts of the afterburners to close the gap. Usually, a one- or two-second shot is all you need to close to optimum weapons range.

THE JOYS OF FLYING BACKWARDS

The inclusion of a reverse throttle setting in *Interceptor* opens up some interesting tactical possibilities. Here are two of the most effective:

- **The Top Gun trick:** Sometimes an enemy ship gets on your tail and all the maneuvering in the world on your part doesn't seem to shake it. If this happens to you, try throwing the throttle into full reverse. If the enemy ship is close behind you, nine out of ten times it'll fly right past you. *Now* who's got the advantage?

- **Hey! Follow me!:** One minor glitch in the enemy A.I. is that they can't tell which end of your interceptor is facing them until you start firing at them. You can use this to your advantage by flying in reverse near an enemy fighter. The fighter will often adopt a pursuit course and start following you. When it closes in, let fly with full guns and a couple of missiles. (Of course, you have to be careful of the enemy's fire for the duration of this little trick as well.)

TARGET APPROACH ASPECT

The direction and aspect of your approach to a target plays a large part in determining the effectiveness of your attacks, especially when it comes to beam weapons. When approaching a target on the same plane, make sure that you are level with the target—in other words, make sure

Tip **Of course, your best bet is to remember that you are in a truly three-dimensional environment, and there is no need to approach your target on the same plane at all. The best possible target aspect you can get on an enemy saucer is to come at it from directly above or below. That way you have the entire disk to shoot at, not just the flat side view.**

TIP-O-MATIC

your ship's aspect is parallel to the enemy's (see Figure 7.8). Because your beam weapons are mounted on the wings of your ships, it is entirely possible that your shots will miss entirely if your ship is perpendicular to the enemy's plane of flight (see Figure 7.9).

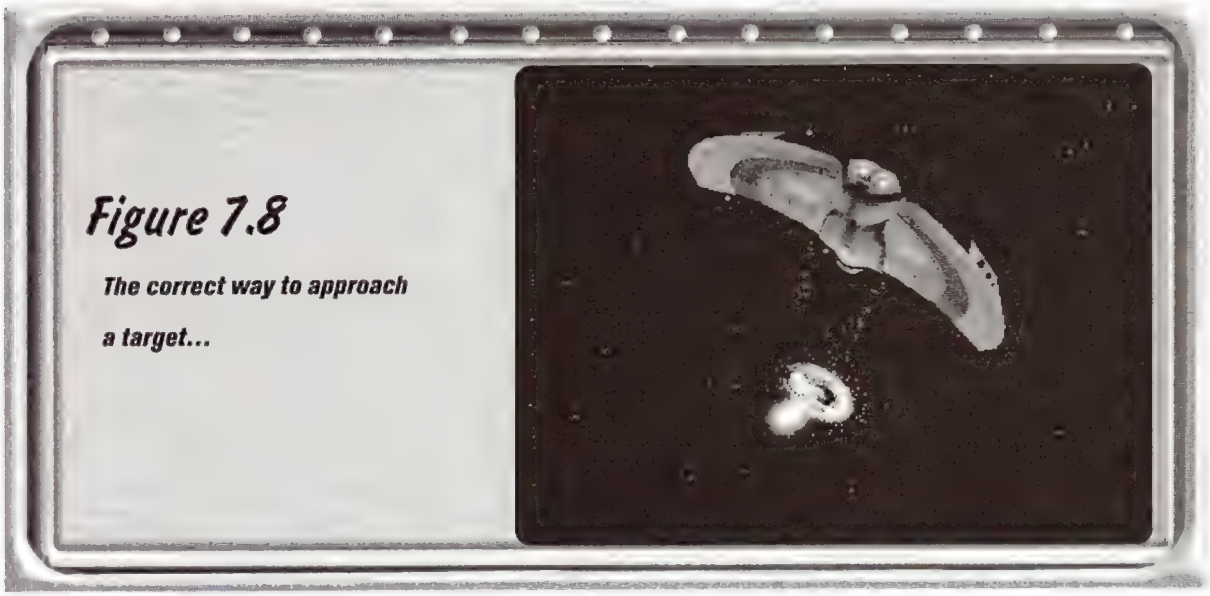


Figure 7.8

The correct way to approach a target...

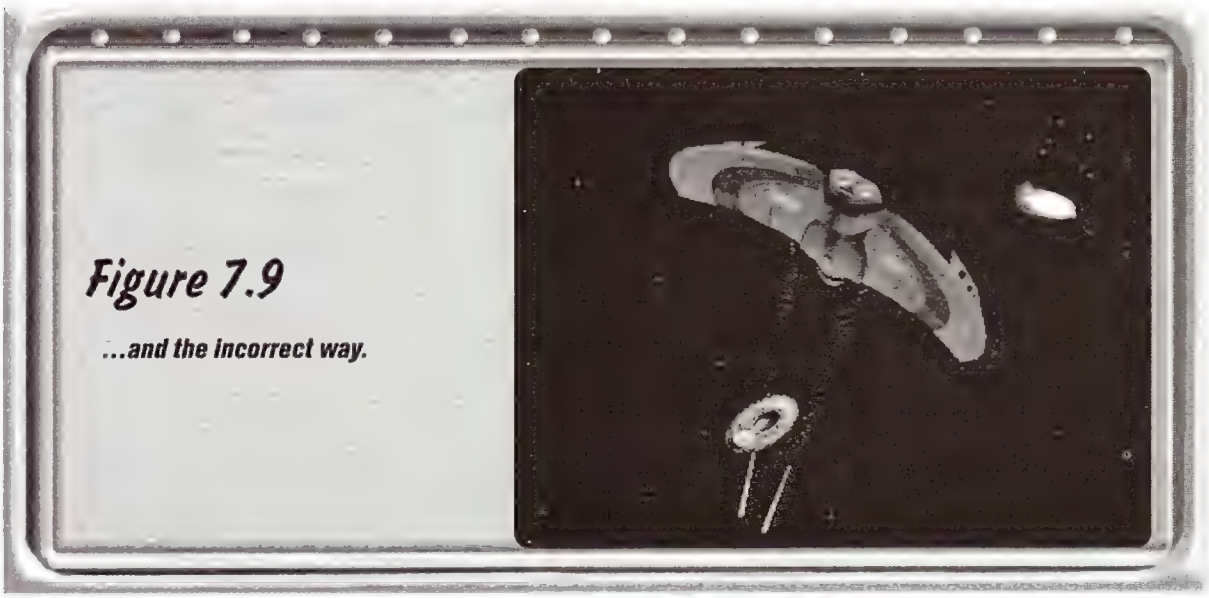


Figure 7.9

...and the incorrect way.

WORDS TO LIVE BY

These sections offer some handy aphorisms that you should always follow. Make them mantras, repeat them over and over to yourself, and when the time comes, you'll make the right decisions without hesitation.

FINESSE THE THROTTLE

In many space combat games, the enemies move at relatively constant speeds. What that means in combat terms is that you can generally lock your throttle on one setting (usually 100%) and forget about it.

This is not the case in *Interceptor*. The enemy A.I. constantly changes speed and direction, making the pursuit a lot more involved. If you use the "set and forget" approach to throttling, you're in for a lot of frustration. When following alien ships, watch them closely for changes in speed and direction and make minute throttle adjustments to compensate. By riding the throttle, you can stay right on the enemy's tail. This takes a bit of practice, but it's well worth the effort.

> **Tip** **Admittedly, making minute throttle adjustments with the keyboard is tough, and it takes a lot more time and effort to become adept at it than it does when you have an external throttle controller. If you can possibly invest in a throttle (or a joystick with a throttle attachment), your piloting will be a lot easier.**
>
> TIP-O-MATIC

FIRE IN CONTROLLED BURSTS

When you're chasing down an enemy ship, your impatience sometimes gets the better of you. Instead of lining up your shots, you just squeeze the trigger and spray the cosmos with fiery plasma. Problem is, only one in 20 of the beams is doing anything other than lighting up the world around you.

Always take the time to aim your shots, and fire in short controlled bursts. You can get away with careless blasting with the more energy-wise weapons like Laser and Plasma Pulse Cannons, but just watch how fast you eat up your energy if you fire your Heavy Lasers indiscriminately.

> **Tip** **Another consideration, in the same vein as controlled beam weapons fire, is whether or not to link your weapons. As a general rule, beam weapons should only be linked (or fired in full-guns mode) when you are in close proximity to the target and are sure that all of the blasts are going to hit. Otherwise, you'll save a lot of energy if you fire your beams singly. (You should never link Psi Blasters! They suck up too much energy.)**
>
> TIP-O-MATIC

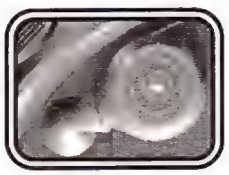
GANG UP ON TARGETS

We all want to be combat aces and save the day single-handedly, but that just isn't always practical. When the enemy is using powerful,

advanced ships, taking them out ship to ship takes a hideous amount of time. In these situations, use your wingmen to your advantage. Team up on individual enemy ships at least two to one if you want to dispatch the enemy fleet in a timely fashion.

KEEP AN EYE ON YOUR SHIELD POWER

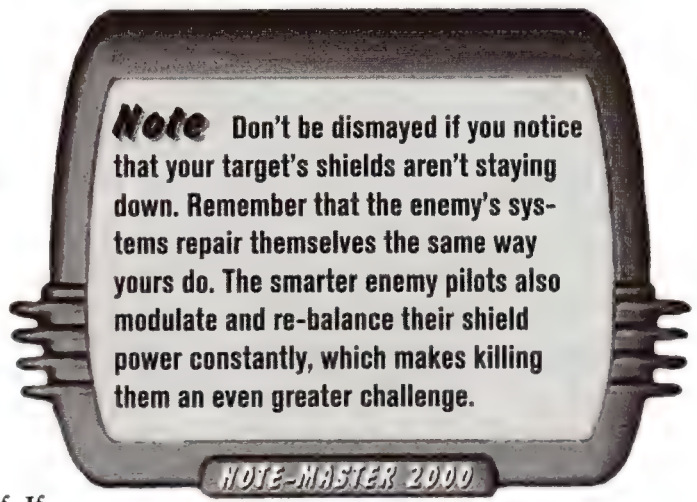
In the heat of the battle, it's really easy to lose track of the small things while you're concentrating on the big picture. One of the things that you absolutely *must* keep an eye on at all times is the amount of shield protection you have. The most frequent scenario is that you are in hot pursuit of a saucer and you haven't noticed that an enemy has taken up position directly behind you. When the creeper starts pounding on you, you'll hear it; and when you hear it, check your shield power. Use the S key to re-balance the shields. If the attack from behind is particularly heavy, don't hesitate to set your shields to full-rear (assuming you aren't being pounded from the front as well).



If the shields get too low, use the ; (semicolon) key to transfer some of the power in your weapons capacitor into your shields. It doesn't take much to bring yellow shields back into the green, and at full weapons recharge you shouldn't miss the energy too much.

KILL THE PHANTASMS AND SHADES FIRST

Toward the middle of the game, many alien squadrons are accompanied by Phantasms and/or Shades. If you notice in your briefing that the squadron you are about to engage has one of these two ships tagging along, make that ship your first priority when you attack. Both of these ships often cloak as soon as they come into close range. By taking them out with missiles from a distance, you can save yourself a lot of grief. If you manage to kill the most deadly ships first, the rest of the fight will be that much easier. (Of course, when you start encountering all-Phantasm squadrons, this isn't an option.)



KILL THE PSILORDS FIRST

This goes hand-in-hand with the previous tactic, since Psilords always fly Phantasms or Shades. When you kill the resident Psilord, the rest of the alien pilots' abilities suffer as a

result. There is even a chance that some of the less hardy aliens will flee the scene in panic as soon as their Psilord leader is taken out.

PRESS YOUR ADVANTAGE

As you pursue an enemy ship, you are bound to inflict damage on one part of the ship more than the other. (In a pursuit situation, most of the damage is usually inflicted on the target's aft shields and armor.) Monitor the target strength indicator constantly and, when possible, concentrate your weapons fire on the weakest part of the ship. This is a great way to cut down your kill time.

TRACKING AND KILLING CLOAKED TARGETS

A heavily damaged ship can be tracked visually even if it engages its Cloaking Device. When the vessel cloaks and drops off your radar, start visually scanning the area. If you look closely (and in the right area), you should see damage particles trailing from nowhere. To blast the cloaked ship, observe the direction of the particles' movement and aim your beam fire just ahead of the glowing particle trail. This is a great way to kill cloaked Shades, since their Accumulator Shields are down while the ship is cloaked.

USE YOUR CLOAKING TIME WISELY

While cloaked, move in behind an enemy and get a missile lock. You can't fire missiles while cloaked, but you can certainly use your down time to get yourself a solid lock so that you can unleash a barrage as soon as you become visible!

MISSILE TECHNIQUES

To complete our course, we'll consider a few topics relating to the successful use of missiles.

EFFECTIVE MISSILE RANGE

Based on their endurance and speed, most of the missiles in *Interceptor* could be considered long-range weapons. Before you start lobbing X-Winders at targets five kilometers away, however, consider this. The farther away the target, the longer the target has to avoid the missile. Remember, missiles aren't as fast as beam weapons. Given the opportunity, enemy ships will be able to dodge or outrun most missiles fired at long range.

The best range for missiles is between one and two kilometers. At this range, most of the missiles are able to

find their targets with minimal effort. (Fire at a range of less than one kilometer and you risk causing collateral damage to yourself. It is also difficult to maintain a weapons lock at such close range.)

EFFECTIVE USE OF THE DOPPELGANGER MISSILE

Doppelganger Missiles are very useful in providing alternate targets for enemies to shoot at in hairy combat situations. One trick that works really well is to fire a Doppelganger and then immediately cloak and zip away as quickly as possible. This often confuses the enemy into thinking that the Doppelganger is actually you. When they pursue your missile, you can move in for the kill.

IMPROVING YOUR MISSILES' HIT PROBABILITY

There are a couple of useful techniques that increase the chance of your missiles hitting their targets. One is to fire two missiles at the same target, but on different trajectories. Fire the first, wait a couple of seconds, and then fire the second. Often, the target is too busy avoiding the first missile to notice that the second is on its way.

The other method also involves distracting the enemy. After you launch your missiles, close in and start firing beam weapons in front of the enemy ship. While the enemy is trying to avoid your beam fire, your missiles close in and hit their mark. (See Figure 7.10.)

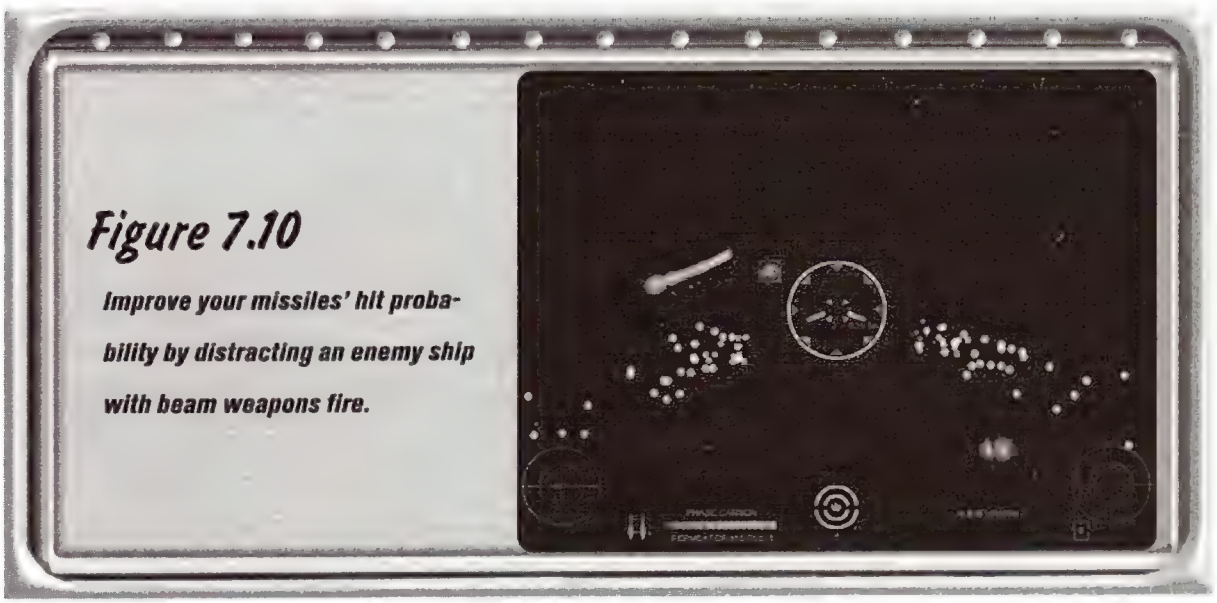


Figure 7.10

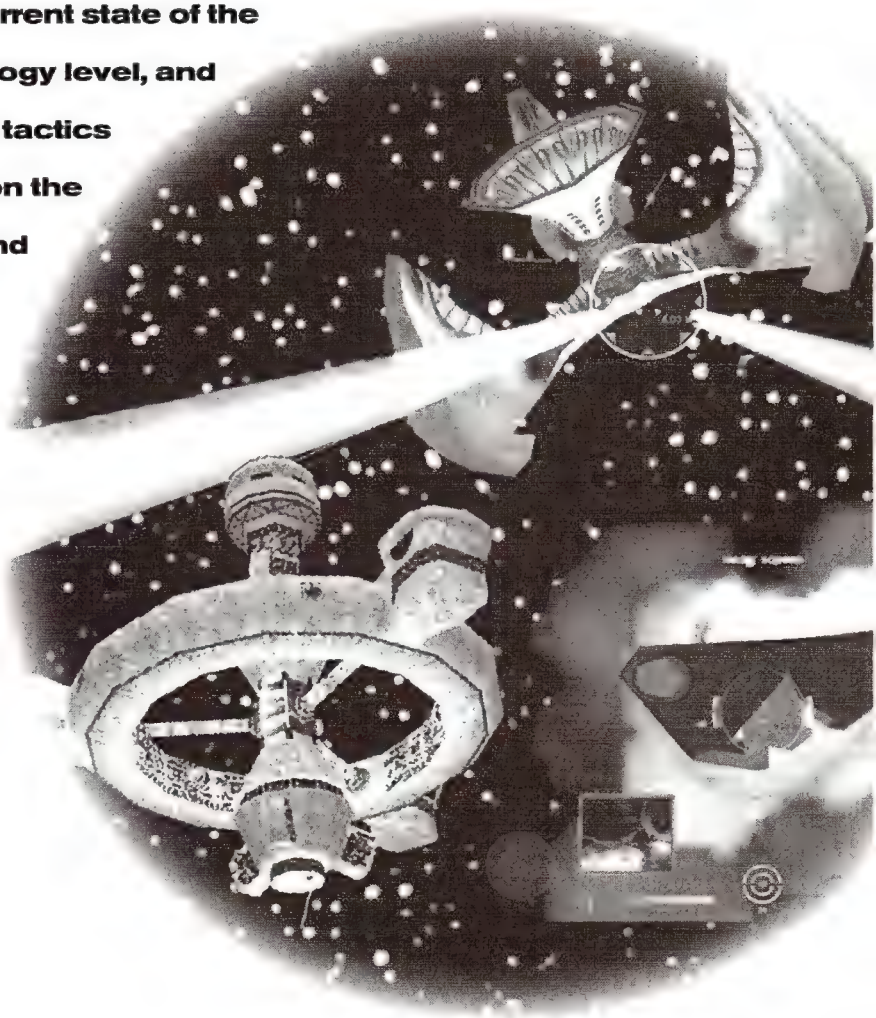
Improve your missiles' hit probability by distracting an enemy ship with beam weapons fire.

Chapter 8

EVERYDAY MISSIONS

OU NOW KNOW all the ins and outs of *Interceptor*'s strategy component, and you've learned just about everything there is to learn about the systems and weapons of your spacecraft and general combat techniques. Now it's time to get down to specifics—exactly what you should expect when you jump into a mission.

Unlike the missions in other space combat games, the majority of *Interceptor*'s missions are not scripted. There are a finite number of mission classifications, but the variety within these classifications is vast. The number and type of ships you encounter depend on a number of factors, including the current state of the aliens' economy, their technology level, and their current agenda. The best tactics to use in the mission depend on the mission objectives, the type and number of enemy ships, and the species of the alien pilots you encounter. As you can see, nothing is cut and dried here.



This chapter describes each of the standard mission categories in *X-COM Interceptor.* You might encounter any or all of these during the course of your game. Which ones you encounter—and how often—depends largely on your tactics and playing style.

DEFENSIVE MISSIONS

Because the aliens are highly motivated to destroy you at all costs, many of the missions you'll fly—especially early in the game—will be defensive missions. These missions range from protecting X-COM probes, outposts, and OPPs to responding to alien attacks on your fighter squadrons and freighter convoys. Defensive missions should always be your top priority—every corporate or X-COM target that the aliens destroy brings you one step closer to defeat.

> **Note** Side missions (like those involving the Kabron Pirates) and the final mission against the alien Doomsday Weapon are described in Chapter 9.
>
> NOTE-MASTER 2000

GETTING AMBUSHED IN DEEP SPACE

From time to time, the aliens attempt to take advantage of X-COM interceptor squadrons that are battle-damaged, low on fuel, and on their way home from battle. No doubt, this is when you are at your absolute weakest, and the aliens know it.

WHEN TO EXPECT THIS MISSION

Deep-space ambush missions can happen any time during the game, but they are most common from mid-game on—when your ships are capable of long-range travel, and you are launching active strikes against distant alien targets. The farther your ships travel, the higher the chance of an ambush.

WHERE THIS MISSION OCCURS

This type of mission can happen anywhere on the map, but it is most likely to occur in alien-held territory. The farther your ships stray from your bases, the higher the likelihood of ambush.

ENEMY SPECIFICS

Attacking squadrons in an ambush can consist of any mix of alien ship types (governed, of course, by the aliens' current level of technology). The number of alien ships participating in an ambush mission is strictly random—it all depends on how many alien ships happen to

be in the area at the time. The base number of ships present depends on game difficulty level, as shown in Table 8.1.

Table 8.1: Base number of alien ships present in a deep-space ambush

Difficulty Level	Base Number of Alien Ships
Beginner	2
Experienced	3
Veteran	2
Genius	3
Superhuman	5

VICTORY CONDITIONS

Destroy or disable all attacking ships.

STRATEGIES

This is just one of those mission types that depends more on luck than on strategy and skill. Even so, there are a few things you can try.

- **Just do it.** Often an ambush hits you when your ships are battered and near death, but there are *other* times when the aliens picked the wrong day to mess with you. If your ships are all in pretty good shape and well-armed, just fight the battle as you would any other.
- **Exercise discretion**. As in "...is the better part of valor." When ambushed, your ships are forced into battle—but nothing says they have to stay there. If all your ships are too damaged to put up a decent fight, press H as soon as the battle starts. The aliens might catch you immediately when you drop back to the CSD but, then again, they might not.
- **Exercise discretion (part two).** There are often situations where one or two ships in your squadron have suffered damage and depleted their weapons prior to the ambush, but the remaining ships are reasonably strong. Save yourself a few hundred thousand dollars and send the damaged ships home immediately upon entering the battle, then duke it out with the remaining interceptors. You just might save a ship or two that way.

DEFENDING PROBES

Probe-defense missions are, without a doubt, the most difficult defensive missions. It's not because the aliens send out a huge armada to take care of a single X-COM Sensor Probe—in fact, they usually send very *few* vessels for this miniscule task. The problem is actually getting to the probe in time to stop them.

WHEN TO EXPECT THIS MISSION

There is no time restriction whatsoever on this type of mission. As soon as the aliens notice you are launching probes, they start shooting them down.

Tip If you find that the aliens are destroying probes in a certain region of space with alarming frequency, don't be discouraged. Although you must keep in mind that the aliens often fly circuitous courses to throw you off, high alien activity usually means that there are alien facilities in the vicinity. This is a promising direction in which to expand your operations. If you keep launching probes in this direction you're likely to stumble upon an alien outpost system or base sooner or later.

TIP-O-MATIC

WHERE THIS MISSION OCCURS

Probe-defense missions take place (obviously) at locations where X-COM Sensor or Hunter Probes are patrolling. The farther into enemy territory the probe is launched, the more likely it is to become the target of an alien attack.

ENEMY SPECIFICS

The aliens can and do use just about any ship type to attack probes. As a general rule, the aliens don't launch dedicated squadrons for this purpose. In most cases, a squadron of alien ships splits when passing close to a probe, leaving a small number of ships behind to take care of this light work. Table 8.2 shows the normal deployment of alien attack vessels for this mission type.

Table 8.2: Base number of alien ships present in an X-COM probe-defense mission

Difficulty Level	Base Number of Alien Ships
Beginner	1
Experienced	1
Veteran	2
Genius	2
Superhuman	2

VICTORY CONDITIONS

Destroy or disable all attacking ships before they destroy the probe.

STRATEGIES

Considering the low cost of probes and the high speed at which they can be deployed, it's almost a waste of time to bother defending them—it's tempting to just let the aliens do as they will, then launch another probe to take the place of the original. You lose no points for not responding to a probe-defense mission. Still, you might not want to go through the hassle of rebuilding your early warning line of probes every few days, so here are a couple of things you can try.

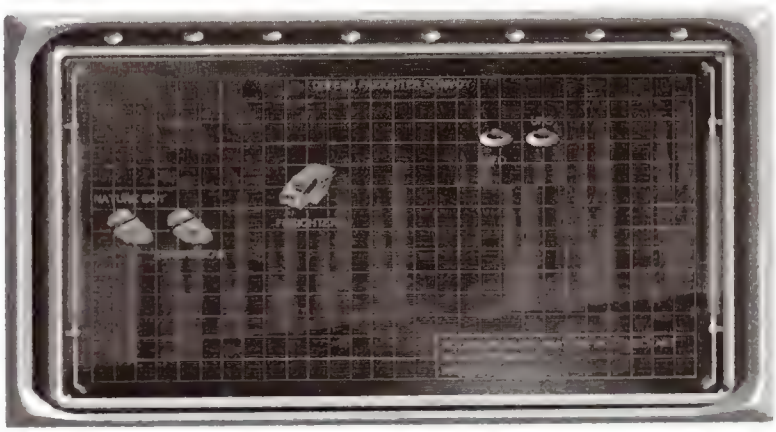
- **Anticipate their next move.** When you have a line of probes set up as an early warning perimeter, it is unlikely that the aliens will attack just one probe. Once they get started, they usually move along the line until all of the adjacent probes are destroyed. Since probes die so quickly, it is unlikely that you'll be able to respond in time to save the first probe (depending on the range, of course)—but you might be able to save the rest in the line. Plot your course toward one of the probes adjacent to the one currently under attack. Chances are you'll make it there ahead of or just slightly behind the bad guys and have a shot at wiping them out before they can do the same to your early warning network. (See Figure 8.1.)
- **Intercept probe bashers with ships already in flight.** If the aliens attack one of your probes while there are X-COM ships in flight nearby, use these interceptors to thwart the efforts of the probe-attack fleet.

Figure 8.1

Heading them off at the pass—anticipating the next move of an alien probe-attack fleet

DEFENDING YOUR LINES OF SUPPLY

Back in the first two Alien Wars, X-COM supplies were apparently delivered by some covert means—you ordered something and, a couple of days later, it simply arrived. Well, those days are long gone. Nothing stays secret for long in the Frontier, and it is only a matter of time before the aliens discover that all your purchased and manufactured goods are delivered by big, slow-moving freighters—and that these freighters are prime targets for attack.



WHEN TO EXPECT THIS MISSION

Freighters are always potential targets, right from the start of the game. However, it is highly unusual for the aliens to pay any attention to them in the early months (regardless of difficulty level). You don't really have much to worry about until after the third month or so, unless your outpost systems are unusually far-removed from your bases.

WHERE THIS MISSION OCCURS

The aliens can attack your freighters anywhere they happen to be. Obviously, this is always somewhere between the freighter's home outpost and an X-COM base. Although many of these attacks occur in deep space, the aliens are sometimes bold enough to attack a freighter inside the outpost system itself.

ENEMY SPECIFICS

Attacking X-COM freighters is an extremely effective way to disrupt your economy—and the aliens know it. As such, they devote more ships to this task than they do to non-critical missions (like attacking X-COM probes). Table 8.3 shows how the numbers pan out.

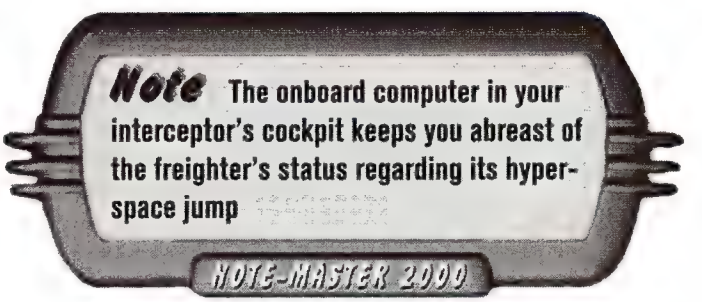
Table 8.3: Base number of alien ships present in an X-COM freighter-defense mission

Difficulty Level	Base Number of Alien Ships
Beginner	1
Experienced	2
Veteran	2
Genius	2
Superhuman	3

VICTORY CONDITIONS

There are actually two ways to win this mission:

- Destroy or disable all attacking ships before they destroy the freighter.
- Keep the aliens occupied long enough to allow the freighters to escape into hyperspace.

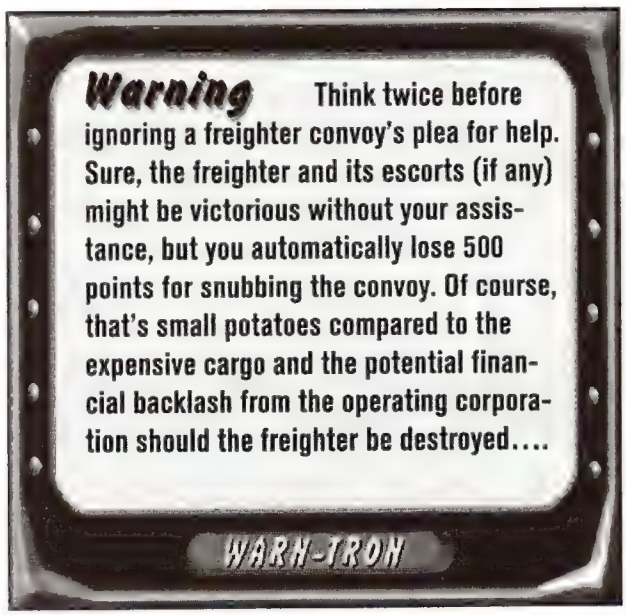


STRATEGIES

- **Listen to the computer.** Remember, one way to win this mission is by having the freighter escape into hyperspace. When you first enter the battle, your interceptor's onboard computer tells you the freighter's current hyperdrive status. This will give you some indication of how long you have to keep the freighter safe. (Sometimes it's as little as 30 seconds.)

- **Stay close to the freighter.** One of the aliens' favorite tactics is to use some of their ships to draw you away while the rest of them cut loose on the freighter. Don't get so caught up in chasing a single alien that you lose track of your mission goal—protecting the freighter. If at all possible, keep the freighter in sight and stay within a kilometer of it. Concentrate your attack on the aliens attacking the freighter.

- **Hire escorts for important cargo.** This is actually a pre-battle tactic. If a cargo shipment is particularly important, pay the extra 10% and hire an escort. The escort pilots aren't exactly top of the line, but they will help you and your wingmen out should you be called upon to defend the freighter convoy. (At the very least, they give the aliens something else to shoot at.)



- **Choose your battles wisely.** Once you have a number of bases up and running and lots of outposts serving them, the freighter traffic gets thick and the chance of freighters being ambushed grows. When the aliens attack a freighter convoy while other combat engagements are also vying for your attention, check the freighter's cargo and make sure it's worth defending. Empty freighters and those carrying unimportant or inexpensive cargo should be given the lowest defense priority.

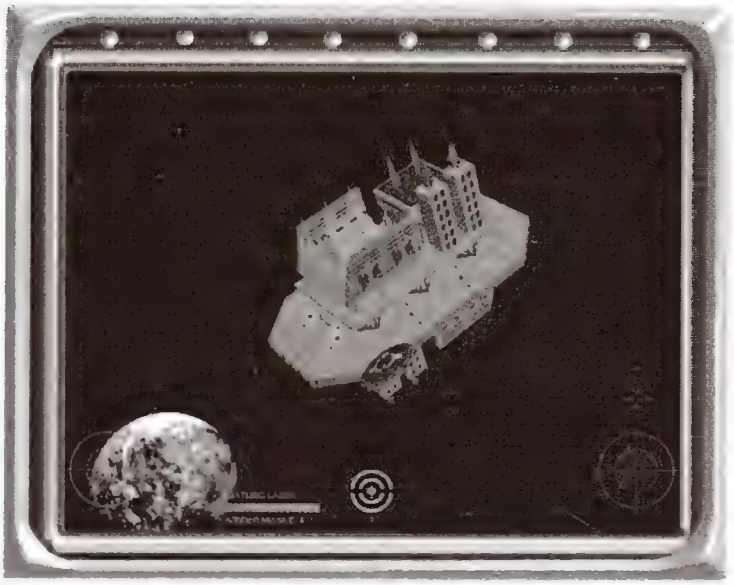
DEFENDING OPPS

Stationary, lightly shielded, and poorly armed, ore processing plants are prime targets for alien attack. Though the loss of an OPP doesn't impact your economy nearly as much as the destruction of an outpost, the monetary blow can still be semi-devastating if it occurs in the first couple months of the game.

WHEN TO EXPECT THIS MISSION

Alien raids on ore processing plants are fairly common early in the game, especially at the higher difficulty levels. Regardless of game difficulty, the aliens tend to ignore OPPs in favor of outposts after the fourth month or so.

WHERE THIS MISSION OCCURS



Obviously, OPP-defense missions take place within an outpost system, either in orbit around a planet or inside an asteroid field.

ENEMY SPECIFICS

The number of alien ships assigned to an OPP attack varies depending on the aliens' economic status and level of desperation. The number of attackers also depends on when the attack takes place—in the first month or so, the aliens often attempt OPP attacks with fleets consisting of as few as three Wraiths. Table 8.4 reveals the exact numbers.

Table 8.4: Base number of alien ships present in an OPP-defense mission

Difficulty Level	Base Number of Alien Ships
Beginner	3
Experienced	4
Veteran	3
Genius	4
Superhuman	5

VICTORY CONDITIONS

Destroy or disable all alien fighters before they destroy the OPP.

STRATEGIES

- **Stay close to the OPP.** Just as they do when attacking freighters, the aliens assign some of their number the task of drawing you away from the main objective. Concentrate your fire on the aliens who are actively engaging the OPP.

- **Don't shoot friendly targets.** At the lower difficulty levels, there may be one or more corporate interceptors on the scene helping to defend the OPP. Make sure you don't shoot them down by mistake.

> **Tip** Don't depend too heavily on corporate interceptors in OPP- and outpost-defense missions. They are somewhat helpful, but their pilots have very limited abilities.
>
> TIP-O-MATIC

- **Beware of falling rock.** OPP-defense missions are one of only two mission types that can take place in an asteroid field. When fighting in this environment, don't get so caught up in the chase that you forget about the huge chunks of pulverized planet floating all around you. A few full-speed asteroid collisions are just as damaging as a full-on enemy plasma barrage.

> **Tip** Watch your speed in asteroid fields. The limits of 3D game technology prevent the game from displaying thousands of asteroids simultaneously–they only become visible when you are within a certain distance. If you go careening at full throttle through the field, you often cannot see asteroids until it is too late to avoid them.
>
> TIP-O-MATIC

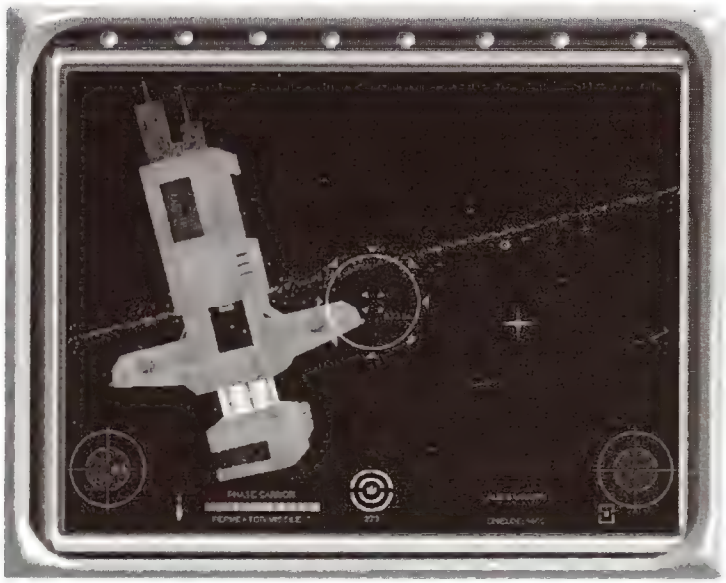
- **Watch who you're shooting, commander! (part one).** Once they feel threatened, the aliens tend to dive close to the OPP's surface to stay out of its weapons arc. When the aliens are close to the OPP, make sure your aim is true before firing your beam weapons—otherwise, you'll only succeed in helping the aliens destroy the OPP.

- **Watch who you're shooting, commander! (part two).** *Never* fire a missile at an alien ship as it is making an attack run on the OPP. If the alien fighter manages to evade the missile during its run, it is likely that the missile will hit the OPP instead of your intended target.

> **Warning** Like freighter convoys, OPPs don't enjoy being ignored in their time of need. Every time you force an OPP to defend itself, you lose 1000 points. (If the OPP loses the battle, you lose the 1000 points plus the points normally lost for an OPP's destruction.
>
> WARN-TRON

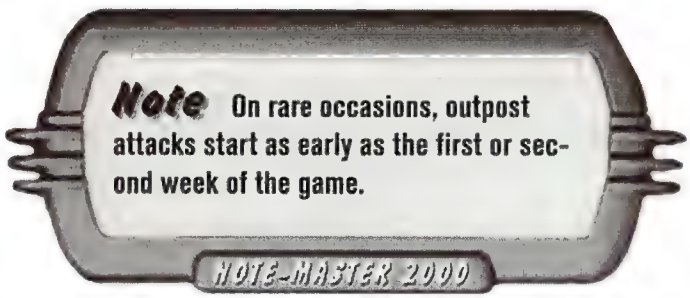
DEFENDING OUTPOSTS

When the aliens want to disrupt your economy, there is no better way to do it than by destroying one of your outposts. When an outpost is destroyed, you lose all your income from that star system—not to mention that all the other corporations in the Frontier have a lower opinion of your abilities afterwards. Defending outposts is X-COM's primary duty in the Frontier so, obviously, outpost-defense missions are not to be taken lightly.



WHEN TO EXPECT THIS MISSION

Aliens usually don't start attacking outposts until a few months into the game (earlier on the higher difficulty levels), and don't get serious about it until your outpost systems start spreading toward alien territory.



WHERE THIS MISSION OCCURS

Outpost-defense missions always occur in orbit around a planet in one of your outpost systems.

ENEMY SPECIFICS

As a general rule, the aliens assign numerous and well-equipped ships to an outpost attack, though if the attack occurs early in the game, the attack fleet could be quite small. Table 8.5 shows the base number of ships you can expect.

Table 8.5: Base number of alien ships present in an outpost-defense mission

Difficulty Level	Base Number of Alien Ships
Beginner	4
Experienced	5
Veteran	4
Genius	5
Superhuman	7

VICTORY CONDITIONS

Destroy or disable all alien fighters before they destroy the outpost.

STRATEGIES

- **Full speed ahead.** When you enter the battlefield in an outpost-defense mission, you are usually six to eight kilometers from the nearest alien fighters (which are usually on the opposite side of the outpost from your position). Dump all your power into the engines and make a beeline for the outpost immediately upon entering the cockpit—ideally, you want to engage the aliens before they are within weapons range of the outpost.
- **Watch out for friendly fire.** Outposts are nowhere near as smart about not shooting you as your wingmen are. Do your best not to get between the outpost's weapons and an enemy target if you can at all avoid it.
- **Stay close to the outpost.** You get the picture—if you let the aliens lure you away, the outpost is likely to die.
- **Watch who you're shooting, commander! (revisited).** Be careful when firing at alien targets that are near the outpost or making attack runs on it, or else your stray shots and missiles might hit the outpost. (See Figure 8.2.)

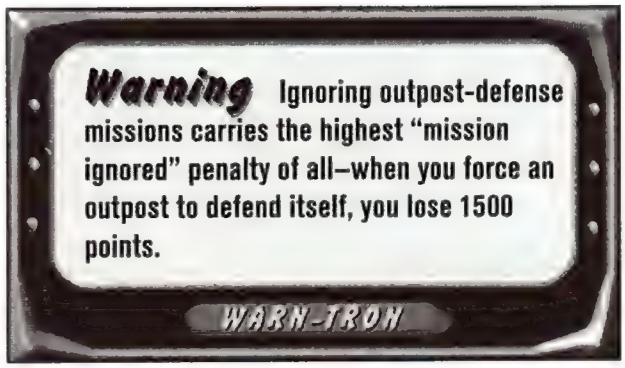
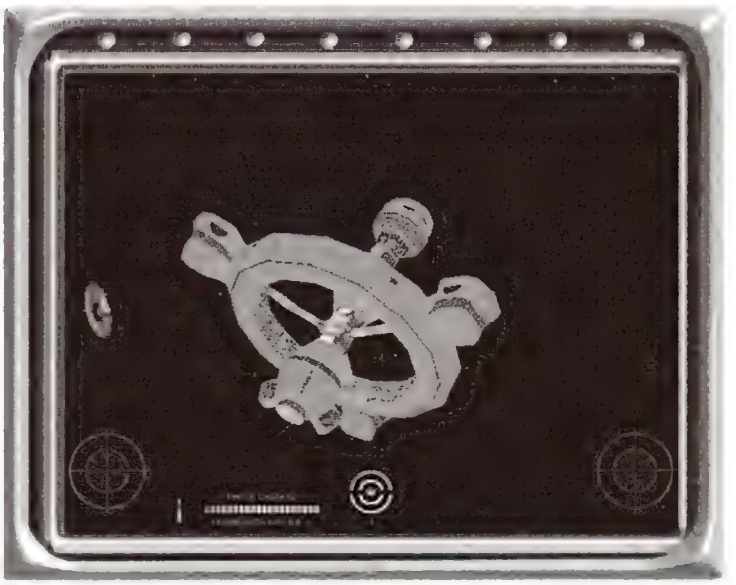


Figure 8.2

An alien fighter seeks shelter close to the surface of an X-COM outpost.

DEFENDING X-COM BASES

X-COM's Frontier bases are obviously very important, and the aliens know it. Damage to or destruction of an X-COM base can result in anything from the loss of research download capability and cargo to the inability to house and launch interceptors. (And, of course, if your last base is destroyed, you lose the game.)



WHEN TO EXPECT THIS MISSION

It is extremely uncommon for the aliens to launch attacks on X-COM bases until about halfway through the game, though they tend to be a bit bolder at higher difficulty levels. The more bases you establish, the more likely it is that the aliens will attempt an attack—so when you start building more bases, your chances of having to defend one from alien attack increase.

WHERE THIS MISSION OCCURS

X-COM base-defense missions take place in deep space near the base.

ENEMY SPECIFICS

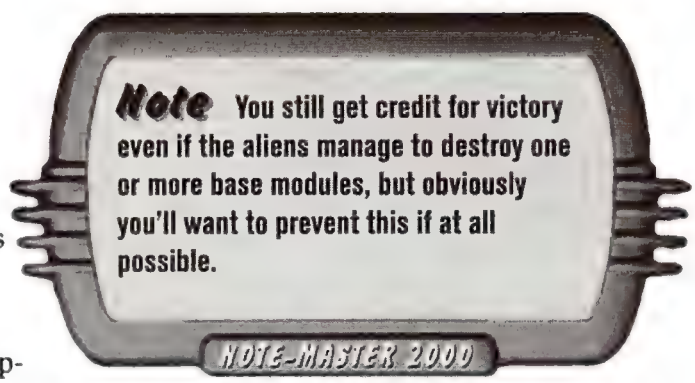
The aliens seldom approach an X-COM base unprepared. Base attacks are usually carried out by "large" or "huge" alien fleets. Table 8.6 shows the specifics.

Table 8.6: Base number of alien ships present in an X-COM base-defense mission

Difficulty Level	Base Number of Alien Ships
Beginner	5
Experienced	7
Veteran	5
Genius	7
Superhuman	9

VICTORY CONDITIONS

Destroy or disable all alien fighters before they destroy the base.



STRATEGIES

- **Help your bases to help themselves.** Every new base comes complete with three beam-weapon defense modules at random locations. This is helpful, but you can certainly do better. The more weapons you put on the base, the more the base can help you when you are attempting to defend it.
- **Evaluate the threat.** Concentrate your attacks on the alien ships that pose the most immediate threat—that is, the ones that are firing on the base. Don't allow yourself be lured too far from the base.
- **There's safety in numbers.** Never go into a base-defense mission alone. In fact, if you have five ships available at the time, you should launch all five for this defensive effort. There are lots of targets, and the more people you have gunning for them, the better off you are.

- **Provide wingman guidance.** Your wingmen aren't half-bad when it comes to choosing targets, but it never hurts to coax them a bit. If there are multiple aliens firing on the base simultaneously, target one at a time and order a wingman to attack the target. After you assign your wingmen, pick a target for yourself and go to it.
- **Use the base to your advantage.** There are lots of ways to do this. If you can keep your enemies close to the base, the base's weapons can help you destroy them. Also, you can sometimes lose an enemy missile by diving through the base ring. (Use the latter tactic sparingly, since the missile you lose will probably hit the base.)
- **Watch those stray shots.** By now you should be getting the idea, but just to reiterate: To avoid causing friendly-fire damage, be cautious when firing your weapons in close proximity to the base.

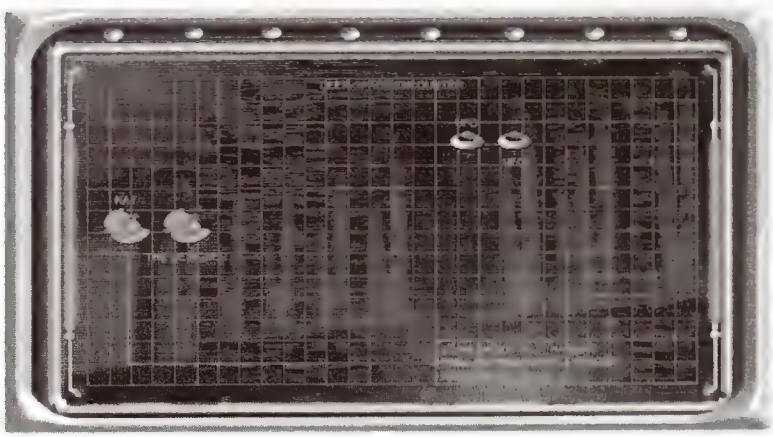
OFFENSIVE MISSIONS

Of course, you shouldn't spend the whole game just sitting around waiting for the aliens to come to you. From the first week of the game, you'll start seeing alien craft patrolling X-COM space. Not all of them are out to attack you—on the contrary, most of them are just snooping around, noting the positions of your outposts and bases and relaying that information back to the folks at home. You *could* just let these little unscheduled visits slide but, eventually, the aliens will take your lack of interest as a sign of weakness and start striking at the ships and facilities that are vital to your survival—and that of the entire human race.

That's where offensive missions come in. If you move against the aliens firmly but wisely you can keep *them* off-guard and on the defensive until you're ready to mount your final strike.

DEEP-SPACE ENCOUNTERS

This is probably the most common mission type in the game—an alien squadron flies into sensor range of one of your probes, ships, or facilities, you're notified, and you launch a mission to intercept.



This basic mission is somewhat analogous to the UFO interceptions in the first two X-COM games. The purpose of the mission is to stop the alien squadron before it has a chance to make a move against X-COM or civilian facilities.

WHEN TO LAUNCH THIS MISSION

You can expect random alien squadrons to start making appearances within the first game-day or two. Most of the early squadrons are long-range patrols that are just passing through. Later in the game, most of the squadrons you encounter will be on some specific mission. Whether or not you choose to attack them is completely up to you.

WHERE THIS MISSION OCCURS

Deep-space encounters, as their name implies, take place in deep space. The battle occurs wherever your ships intercept the enemy.

ENEMY SPECIFICS

The number of alien ships present in a deep-space encounter varies widely depending on the alien squadron's intended mission—there is no way to predict the exact number of ships present. Before you launch an attack against an alien squadron in deep space, gather some information. By single-clicking the squadron's icon on the CSD map, you can get a general idea of how many enemy ships are present. Each alien flight group is designated small, medium, large, or huge. Table 8.7 shows the number of possible ships in each size class.

Table 8.7: Size classifications for alien squadrons

Size Class	Possible Number of Alien Ships
Small	1-3
Medium	4-6
Large	7-9
Huge	10-?

You can also get precise information on the number and type of ships in the squadron by double-clicking the alien flight group's icon on the CSD map for a detailed report. (See Figure 8.3.)

Figure 8.3

Detailed information on an alien squadron

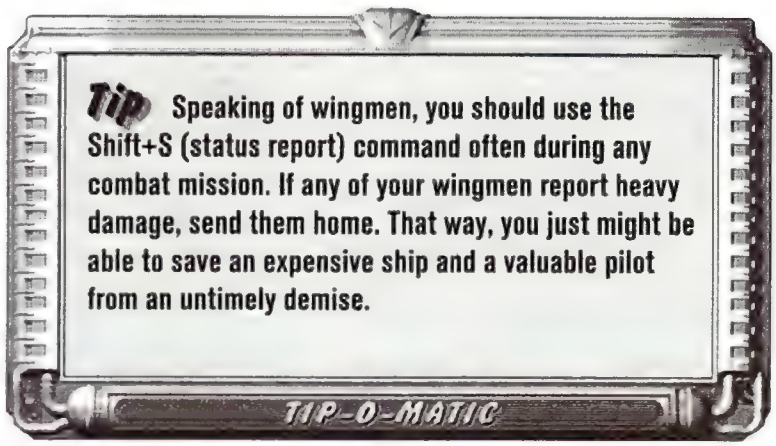
VICTORY CONDITIONS

Destroy or disable all alien targets.

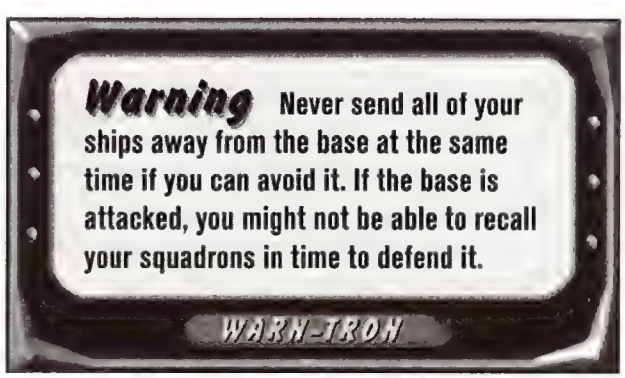
STRATEGIES

- **Be prepared.** Never engage in a deep-space attack mission without first knowing the size of the alien squadron. Armed with this information, you can choose the right number of interceptors for the job at hand.
- **Choose your battles wisely.** Early in the game, you have little to lose by attacking every small alien squadron that comes along—it's an easy way to rack up some points and give your pilots some much-needed experience. Later in the game, however, you need to concentrate your attacks on those aliens who pose an immediate threat. Ignore small squadrons and concentrate on those that are classified as medium and larger.
- **Let your bases help out.** Large and huge alien squadrons are almost always on their way to attack one of your bases. Depending on the types of ships present (and their pilots' skill), it might be difficult or impossible to defeat all these ships in deep space. However, if you let them get to the base and *then* attack them, you stand a much better chance. Remember, the aliens are mission-aware—in a deep-space encounter, their mission is to destroy all X-COM fighters, but in a base attack, their mission is to destroy or disable the base. With another goal/target to concentrate on, the aliens are easier to fight.

- **Don't be a "bug hog."** You know how your wingmen often sound annoyed at being told to ignore a target? They should be! If you let your wingmen help, you may not rack up personal kills as quickly as you like, but you will have a better chance of succeeding. (This is especially true against larger alien squadrons.)



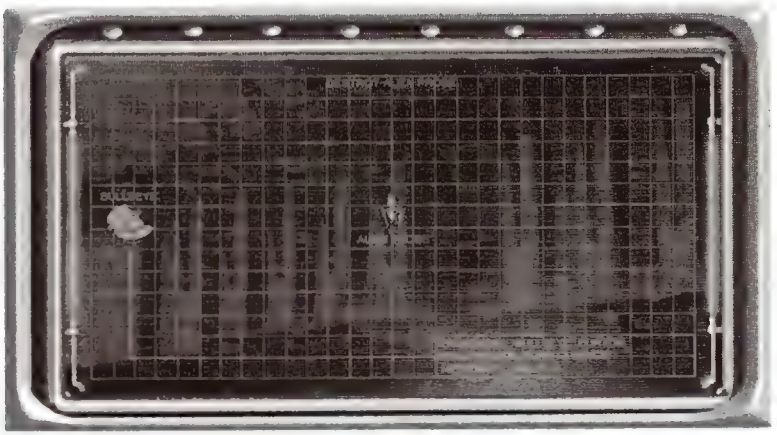
- **Capture alien ships.** Deep-space encounters are the best missions in which to capture the alien ships you need for research. Disabling alien fighters, especially the Phantasm and Shade, is a time-consuming process. Attempting to disable aliens during a defense mission puts the facility you are defending at risk (not to mention that the weapons fire from bases, outposts, and OPPs tends to destroy the intended target before you get a chance to disable it). Attempting to disable aliens during attacks on their facilities is foolhardy, since it distracts you from your main goal.



- **Remember the dynamic nature of the game.** There is nothing that says you have to destroy the aliens all at once. If things start going sour, hyperjump out of the battle. Once you get back to the CSD, launch a new squadron of ships to intercept the same alien flight group. Even if your first squadron was no match for the aliens when they were at full strength, your second might be able to take them on after the first squadron softens them up a bit.

ATTACKING ALIEN PROBES

Attacking an alien probe is usually a pretty straightforward task—a few well-placed shots, and boom!—no more probe. Don't be lulled into complacency, though, because this mission type often has a surprise or two prepared for the unsuspecting X-COM pilot.



WHEN TO LAUNCH THIS MISSION

The aliens use Sensor Probes as early as the first day of the game. You don't necessarily *see* them, but they are definitely there. It usually isn't until a month or more into the game that the aliens start launching Data Jammer Probes to block your research downloads. Attacking Sensor Probes is optional. (Truth be told, the aliens don't really need to launch probes to find you.) Attacking Data Jammer Probes is more of an immediate concern—you should launch attacks against them immediately to prevent the long-term disruption of your research efforts.

WHERE THIS MISSION OCCURS

Alien Sensor Probes can be launched anywhere you can launch your own probes. Data Jammer Probes are always launched very close to an X-COM base. In either case, the battle takes place in deep space.

ENEMY SPECIFICS

Probe-attack missions are somewhat different from all other mission types. Early in the game, alien probes have no protection whatsoever—they are unarmed, and the aliens haven't enough resources to defend them. In later parts of the game, however, a small alien squadron might be hiding out near the probe to ambush you and prevent you from destroying it. Table 8.8 shows the possible number of alien ships at each difficulty level.

Table 8.8: Possible number of alien ships in a probe-attack mission

Difficulty Level	Base Number of Alien Ships
Beginner	2
Experienced	2
Veteran	3
Genius	3
Superhuman	4

Probes are not always protected by ships, however. The aliens often set up a defensive perimeter of mines around the probe. These mines can be any of the three available types: Explosive, Beam, or Missile. (See Figure 8.4.) Minefields are difficult to detect visually from any significant distance, and they don't show up on your sensor scans until after you research them.

> **Warning** You might also occasionally encounter mines surrounding alien outposts and mining platforms. Beware!
>
> WARN-TRON

Figure 8.4

An alien probe surrounded by a minefield

VICTORY CONDITIONS

Destroy the alien probe.

> **Note** You don't have to destroy mines and ships that are defending the probe in order to be victorious.
>
> NOTE-MASTER 2000

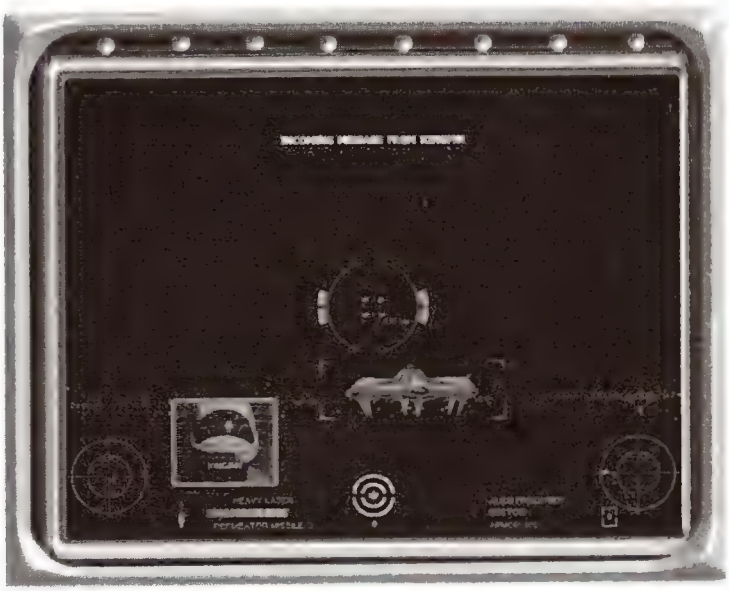
STRATEGIES

- **Play it safe.** This is the best and only piece of advice for probe-attack missions. Move to within missile range of the probe and stop. Get a missile lock, fire your missile, watch the probe die, then leave. Hidden defensive fleets don't appear until you make a close approach to the probe, and mines don't activate until you enter their detection range (which, with one exception, is less than your missile range).

> **Tip** The only problem you might encounter when using the long-range attack strategy against probes is a minefield composed of Missile Mines. These mines have a chance of targeting you even at a distance. If you see missile trails appearing as you approach the probe, quickly fire your missile, then back up and remain out of missile range while you wait for confirmation of the probe's destruction.
>
> TIP-O-MATIC

ATTACKING ALIEN FREIGHTER CONVOYS

The aliens use freighters to transport weapons and supplies just like you do. Every freighter you manage to destroy robs the aliens of necessary resources. That's always a good thing. This is definitely the easiest (albeit the least effective) way to disrupt the alien economy.



WHEN TO LAUNCH THIS MISSION

Although attacking an alien freighter is an easy mission, *finding* alien freighters is not so easy. You're unlikely to encounter freighters near X-COM space (except for those escorting pieces of the Doomsday Weapon, which appear in a special mission type described later in this chapter). Until you locate some alien outposts and/or bases, you won't even see alien freighter convoys—and, until your ships are equipped with advanced drive systems (or you build a base extremely close to alien territory), you won't be able to attack them.

WHERE THIS MISSION OCCURS

Freighter-attack missions always occur deep in alien-controlled territory. More often than not, the setting for the mission is deep space.

ENEMY SPECIFICS

Aliens defend their freighters just as you do, with small squadrons of escort fighters. Table 8.9 shows the number of possible defenders in an alien freighter convoy.

Table 8.9: Possible number of alien fighter escorts in a freighter-attack mission

Difficulty Level	Base Number of Alien Ships
Beginner	1
Experienced	2
Veteran	2
Genius	3
Superhuman	4

Of course, alien freighters are not defenseless in and of themselves. They have two 360-degree beam weapon mounts, one top-center and one bottom-center. In addition, some freighters are equipped with a complement of up to ten Drones—unmanned craft armed with beam weapons. (See Chapter 6 for a description of the Drones' abilities.) The Drones are released as soon as an X-COM ship makes a close pass on the freighter.

VICTORY CONDITIONS

Disable or destroy the alien freighter before it can enter hyperspace.

Note You don't have to destroy defending fighters or Drones in order to achieve victory in a freighter-attack mission.

NOTE-MASTER 2000

STRATEGIES

- **Go for the freighter first.** The alien fighters assigned to freighter escort duty have one

primary goal: draw your attention long enough to allow the freighter to make the jump to hyperspace. When you jump into the mission, assign your wingmen to destroy the defending fighters while you take off at full speed to attack the freighter. After you disable or destroy the freighter, you can help your wingmen with the cleanup work.

Tip **Depending on the difficulty level and the strength of the freighter's shields and armor, it takes two to three Permeator Missiles to achieve total destruction. With the exception of the Fusion Missile (which is certainly overkill against a freighter), it takes four or more of most other missiles to achieve the same result.**

TIP-O-MATIC

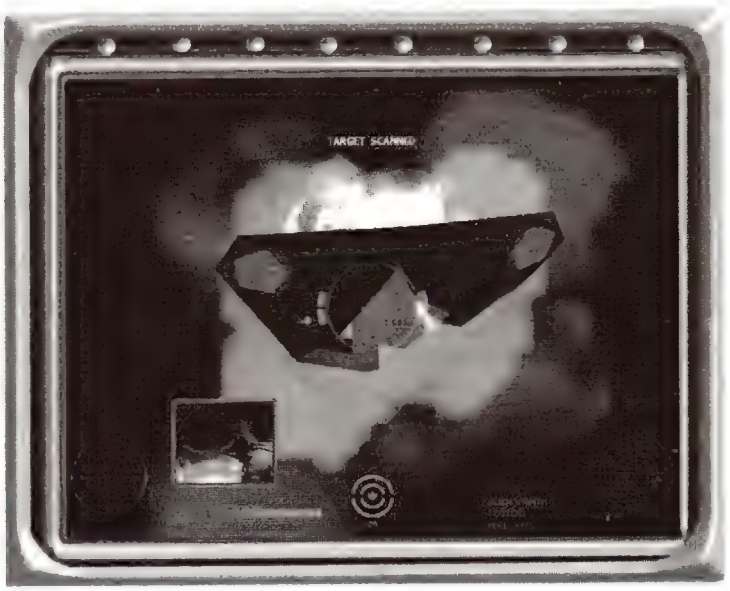
- **Beware the Drones!** Don't get too overzealous as you chase the freighter—if you're out to destroy it, close to missile range and fire from a distance. You can usually destroy the ship before the Drones are able to catch you. Once the freighter is dead (or disabled), about 75% of the Drones lose guidance and become harmless.

ATTACKING ALIEN MINING PLATFORMS

A successful attack against an alien mining platform has the same effect on the aliens' economy that the loss of an OPP has on yours—it makes the outpost system slightly less profitable. Aside from freighters, mining platforms are the easiest targets you can attack to disrupt alien operations.

WHEN TO LAUNCH THIS MISSION

Mining platforms are a bit easier to locate than freighter convoys—all you have to do is find an alien outpost system. This relatively easy but time-consuming task can be accomplished by launching probes directly to star systems in alien-held space. You cannot launch this mission until your base proximity or engine power



allows your ships to reach the alien system in question. You *should* not launch this mission until you have a fleet of ships that includes at least one Firestar or Super Avenger capable of carrying the extra firepower necessary to destroy larger facilities.

WHERE THIS MISSION OCCURS

Like OPP-defense missions, attacks against alien mining platforms always take place either in planetary orbit or in an asteroid field.

ENEMY SPECIFICS

Depending on the aliens' current state of economic affairs, mining platforms might not be protected by fighters at all. Table 8.10 shows the number of fighters that may be present when mining platforms *are* protected by fighters.

Table 8.10: Possible number of alien fighters in a mining-platform-attack mission

Difficulty Level	Base Number of Alien Ships
Beginner	4
Experienced	5
Veteran	4
Genius	5
Superhuman	7

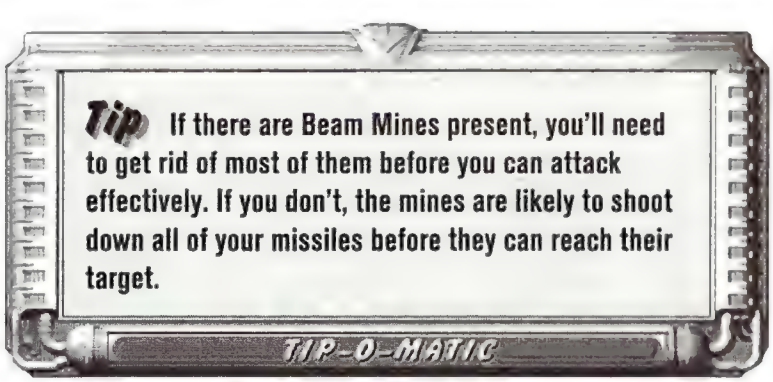
Mining platforms have several beam weapon mounts, and might also be protected by minefields consisting of Explosive, Missile, or Beam Mines (or any combination thereof).

VICTORY CONDITIONS

Destroy the alien mining platform.

STRATEGIES

- **Take out the defenders first.** If there are fighters defending the facility, make them your first priority. Once they are gone, you can take



out the mining platform at your leisure. If there are mines present, take out enough of them to clear a wide path that allows you to close on the platform.

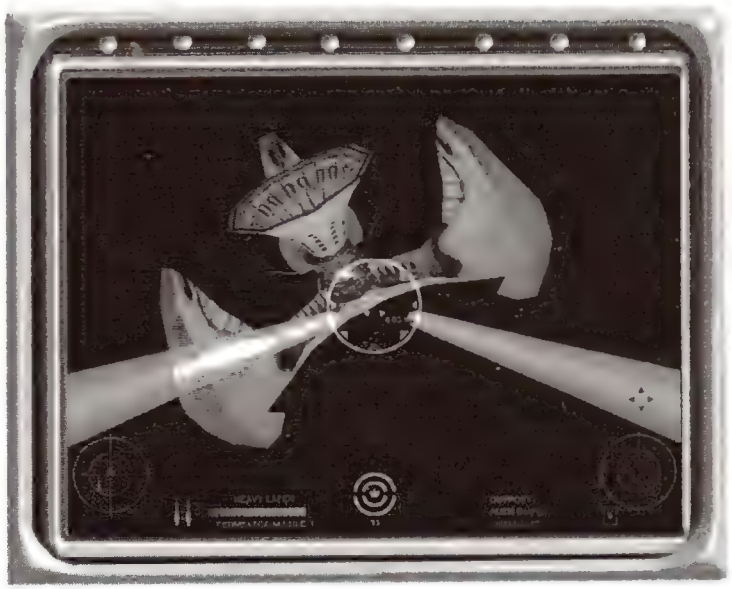
- **Don't bring a knife to a gunfight.** By the time you go on the offensive and start taking out large alien facilities, you should have the proper offensive equipment to do so. (Hint: Lightning IIs and X-Winder Missiles are *not* the right equipment.) You shouldn't consider attacking a mining platform with anything less than a Firestar armed with Elerium Torpedoes. (The stronger the missile, the fewer you'll need to destroy the target.)

- **Watch your approach!** An alien mining platform has a number of beam weapon mounts, and there are very few blind areas where you can approach and not be in the line of fire. If you can manage to remain outside of beam weapon range, you are in good shape. If you must strafe the platform, however, borrow an alien trick and skim close to the target's surface—if you remain close, the platform's weapons can't target you and any alien fighters that fire at you have a good chance of hitting the mining platform instead.

- **Pay attention to asteroids.** When you're attacking a mining platform inside an asteroid field, watch out for natural obstacles just as you would when defending one of your own OPPs in similar conditions.

ATTACKING ALIEN OUTPOSTS

The most effective way to disrupt the aliens' economy is to destroy one of their outposts. You know what the loss of an outpost system does to your own economy—less money, less-efficient shipping and manufacturing, and so on. Well, here's your chance to inflict the same sort of economic chaos on the aliens.



WHEN TO LAUNCH THIS MISSION

If you can locate an alien mining platform, you've (obviously)

located an outpost. Alien outposts are usually better defended than mining platforms and they definitely have better shields and stronger hull integrity, so you'll want to have a decent fleet available for the attack. Chances are you won't be ready for an outpost strike until about halfway through the game.

WHERE THIS MISSION OCCURS

An alien-outpost attack occurs in the same environment as an X-COM outpost defense: in planetary orbit.

ENEMY SPECIFICS

As with mining-platform-defense forces, the number of alien fighter craft patrolling near outposts is dependent on a lot of factors, including the alien economy and base proximity. Table 8.11 shows the base number of ships you can expect.

Table 8.11: Possible number of alien fighters in an outpost-attack mission

Difficulty Level	Base Number of Alien Ships
Beginner	5
Experienced	7
Veteran	5
Genius	7
Superhuman	9

Outposts are armed with several beam weapon mounts, and are often protected by minefields consisting of Explosive, Missile, or Beam Mines (or any combination thereof).

VICTORY CONDITIONS

Destroy the alien outpost.

STRATEGIES

- **Choose a lucrative target.** When choosing an outpost to attack from multiple candidates, pick the one that is most profitable to the aliens. Look for an outpost system that has either lots of planets or, better yet, one or more asteroid fields. That way you maximize your economic impact on the aliens.

- **Take out the defenders first.** This is true for mining platforms and goes double for outposts. If you have to worry about being shot from behind, you'll never be able to launch a prolonged barrage against the outpost. Remember to take out any Beam Mines before you start launching missiles.

- **Be prepared.** As in mining-platform attacks, you need to take the right ships and weapons to get the job done. You never know how many defenders you'll be facing, so you should take at least three wingmen along for the ride. A force comprising Firestars and/or Super Avengers is recommended. Take along some powerful missiles—a couple of Fusion Missiles will make fast work of an outpost.

> **Tip** If you want to take out an entire outpost system in one fell swoop, take a Super Avenger armed with a Nova Bomb with you. When you enter the battle, fire the Nova Bomb into the star. Assuming the bomb makes the jump to hyperspace, you win! Hyperspace out before the big bang and rejoice in the huge number of points you receive for the destruction of not only the outpost but every one of its mining platforms as well!
>
> TIP-O-MATIC

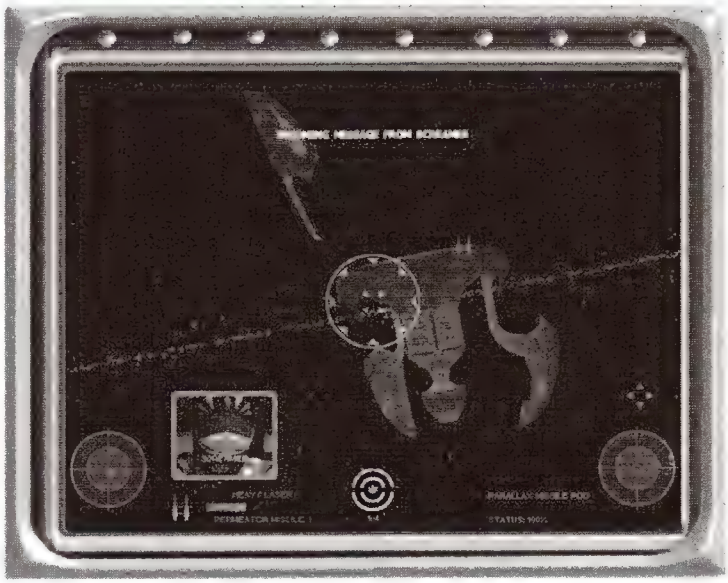
- **Use the structure to your advantage.** If the firefight gets too hot, dive in close and skim the surface of the outpost. The outpost's weapons won't be able to shoot you there, and any aliens shooting at you have a good chance of hitting the outpost instead.

ATTACKING ALIEN BASES

Attacking alien bases is extremely risky—but with maximum risk goes maximum reward. By destroying or disabling an alien base you can severely impact alien activity in the vicinity of that base. Just make sure you're up to the challenge before you make the attempt.

WHEN TO LAUNCH THIS MISSION

First things first—you have to locate an alien base before you can attack it, and that's sort of a hit-or-miss affair. The best way to locate a base is to locate several alien outpost systems and post some probes nearby to monitor alien freighter traffic. Observe the patterns of flight closely and you'll eventually find a base.



As with other alien stationary targets, you can attack any time you have the means to get your ships to the location. Once you locate a base, you need to decide whether you want to damage the base or attempt to destroy it outright. The former is, obviously, easier to accomplish, but either proposition is pretty dangerous. Don't even think of attempting to destroy an alien base until you can field a squadron of five Super Avengers, all armed with Fusion Missiles. For a disabling mission, a couple of Super Avengers supported by Firestars should do the trick.

WHERE THIS MISSION OCCURS

Like X-COM bases, alien bases are located in deep space—hence the battle takes place in deep space near the base.

ENEMY SPECIFICS

The aliens guard their bases just as zealously as you guard your own, so you can expect some fierce resistance. Table 8.12 shows you the specifics.

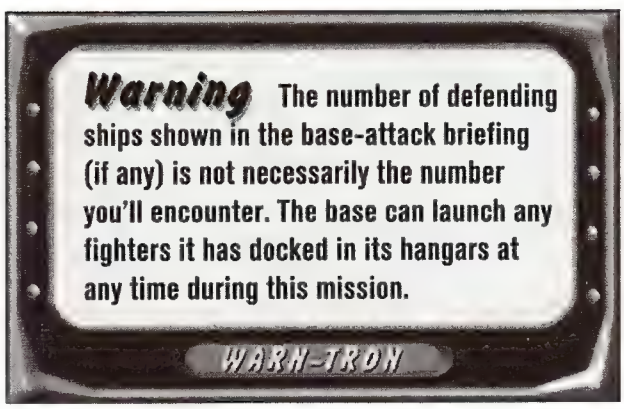


Table 8.12: Possible number of alien fighters in a base-attack mission

Difficulty Level	Base Number of Alien Ships
Beginner	5
Experienced	6
Veteran	5
Genius	7
Superhuman	8

In addition to the attending fighters, alien bases can be equipped with up to ten weapon mounts—beams, missiles, or a combination of the two. The exact weapon types vary depending on the current state of the aliens' economy and technology.

VICTORY CONDITIONS

There are two degrees of victory in an alien-base attack:

- **Damage the base.** To get credit for damaging the base, you and your wingmen must destroy at least one base module.
- **Destroy the base.** You win the mission if you completely destroy the base (obviously).

STRATEGIES

- **Target the secret "damage zones."** Alien bases have a huge number of hit points, and are extremely hard to destroy outright—however, there are four weak points in the aliens' design. (See Figure 8.5.) You cannot lock onto these points with your targeting system—simply aim your weapons at the general locations indicated. By destroying all four damage zones, you destroy the base. (Table 8.13 shows the hit point strength of the damage zones relative to the hit points of the entire base structure.)

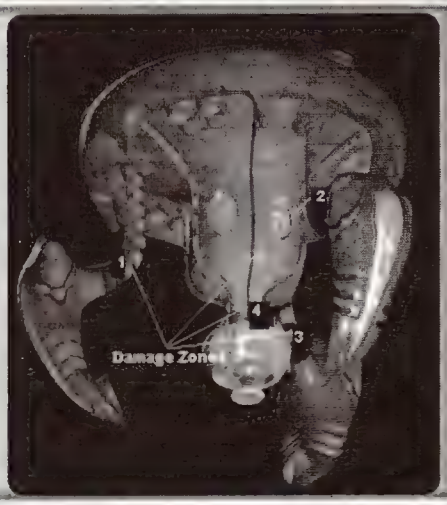
Table 8.13: Hit points of damage zones versus the entire alien base

Structure	Hit Points
Entire base	5,000
Tendril attachment points (1-3)	700 (each)
Reactor core (4)	2,000

- **Make the hangars your top priority.** When you arrive, send your wingmen off to fight the base defenders while you move on the base itself. Set your targeting system to include base modules and go directly for the Hangar Pods.

Figure 8.5

Damage zones—weak points in the aliens' base architecture



By taking out the hangars first, you eliminate the chance for the base to launch reinforcements. Also, if your attempt to destroy the base should ultimately fail, you have dealt the aliens a grave blow by eliminating their fighter force for the next 20 days or so (while they rebuild their hangars).

- **Take out the weapons.** If you move in close enough, you can clearly see the alien base's weapon mounts. Don't get that close, though—just select them on your targeting system or aim at the source of the missiles or beams. Without weapons, the base is nothing but one big hulking target.

- **Come prepared.** If you launch an attack on an alien base—the most powerful alien structure you'll fight (directly) in the game—without the aid of Super Avengers and Fusion Missiles, you are definitely a fool.

> **Tip** **Because of their special effects on shields, Phase Cannons and Permeator Missiles are also recommended for base attacks. Base shields are really powerful....**
>
> TIP-O-MATIC

- **Don't be afraid to retreat.** Destroying an alien base is a tough mission, and there is no shame in retreating. Just try to inflict as much damage as you can. If things get too hot, hyperjump out and try again later.

- **Double-team the base.** Once again, you should keep in mind the dynamic nature of the game. Send two squadrons to attack an alien base simultaneously. Inflict as much damage as possible with the first squadron and jump out when things get too hot. Once you're back at the CSD, you should get the attack prompt for the second squadron (assuming they arrived at almost the same time). When the second squadron enters the battle, the base and its defenders will still be in a weakened state from the initial attack, making things that much easier for you this time around.

Chapter 9

SPECIAL MISSIONS

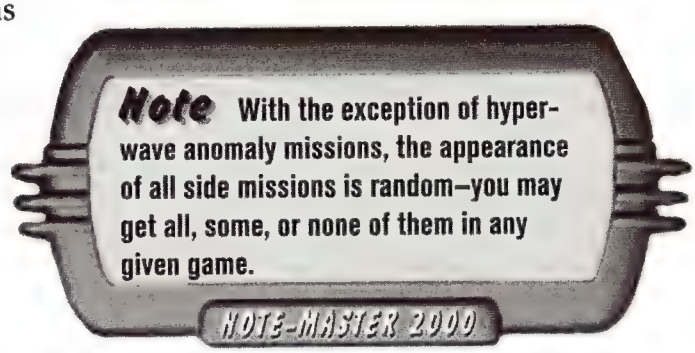
N ADDITION TO THE MISSIONS you fly on an almost daily basis—those described in Chapter 8—there are a number of special missions that are a bit more rare. Many of these missions are known as "side missions." With a couple of notable exceptions, side missions generally have no direct bearing on the ongoing alien storyline of the game—they are extracurricular duties that X-COM is called upon to perform from time to time. In many cases, the successful completion of these missions brings you a reward of some sort (often a sizable sum of cash).

The other two missions that fall into the "special missions" category are the two segments that comprise the final mission—your attack on the alien Doomsday Weapon. This is the battle that all of your previous encounters have prepared you for. If you win, mankind is saved once again. If you *lose*, the Earth is doomed.

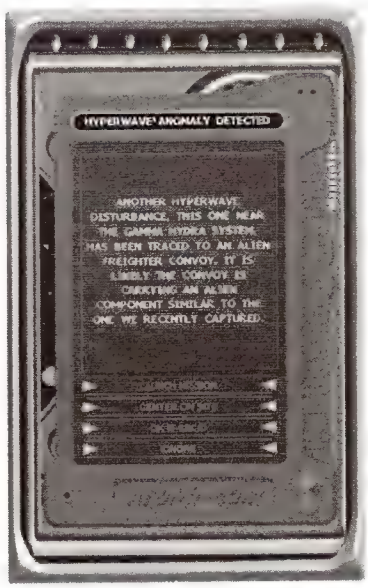
The first section of this chapter describes all the side missions you may encounter throughout the game, explaining the goals and consequences of each one in detail. The remainder of the chapter details all the tasks and events leading up to the final mission—everything from finding the entrance to the alien universe to selecting the proper pilots and weapons to get the job done. Finally, the secrets of both parts of the final mission are revealed, and you'll learn what you need to know to survive and succeed.

SIDE MISSIONS

Side missions are all either defensive or offensive in nature, but are different enough from the other missions in the game that they bear separate mention. In all cases, side missions are governed by some random factor that is not wholly dependent on the progression of the game. The completion of these missions always offers some reward beyond the normal booty recovered at the end of a typical offensive or defensive mission—usually monetary, but not always. And, while many of the side missions have no direct bearing on the events taking place elsewhere in the game, a couple are significant enough that they must never be ignored, under any circumstances. Read on to find out more.



HYPERWAVE ANOMALY (DOOMSDAY FREIGHTER) MISSIONS

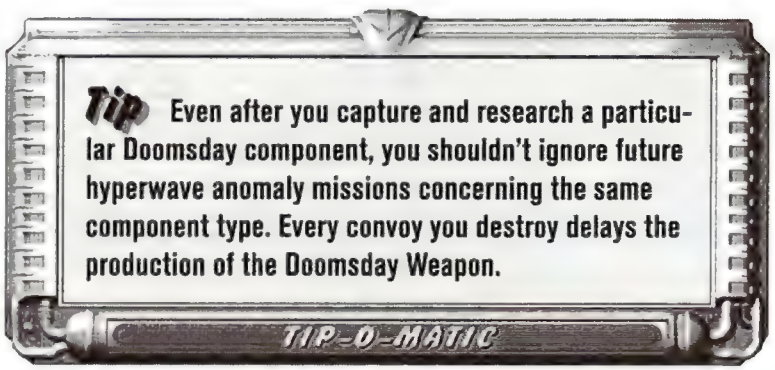


Hyperwave anomaly missions are the most important side missions in the game. As discussed in Chapter 6, the aliens need to successfully produce and transport a certain number of each of three components in order to complete their Doomsday Weapon. Every time you receive the special mission prompt indicating that a hyperwave disturbance has been detected, it means that you have an opportunity to intercept one of these components. This serves two purposes—it allows you to capture and research each Doomsday

component and it enables you to slow down the production of the alien weapon. (The more pieces you destroy, the more they have to build.)

WHEN TO EXPECT THIS SIDE MISSION

There are three waves of hyperwave anomaly missions, one for each of the three Doomsday components. You can expect the first soon after you research Alien Message 1. As long as the aliens are shipping the first Doomsday component (the Alien Structural Component), you'll continue to detect additional convoys transporting this component. After you research Alien Message 3, the second wave begins. The third wave of anomaly messages begins after you research Alien Message 4. The wording of the alert message changes when a new wave of components is being shipped.



WHERE THIS MISSION OCCURS

Doomsday freighter missions always occur in deep space, within reasonable flying distance of X-COM territory.

ENEMY SPECIFICS

Alien Doomsday freighter convoys always have the same basic ships. The escort types change as alien technology progresses, but everything else remains about the same. Here's what you can expect:

- 1 Spirit Freighter
- 1 Harbinger Tug
- 1 Alien Container (the Doomsday component is inside)
- 2–4 alien fighters (type variable)

Usually at the start of the mission the freighter is some distance away, the tug is moving into position in front of the container, and the fighters are somewhere between the tug and the freighter.

VICTORY CONDITIONS

The victory conditions for a Doomsday freighter mission vary depending on the current situation:

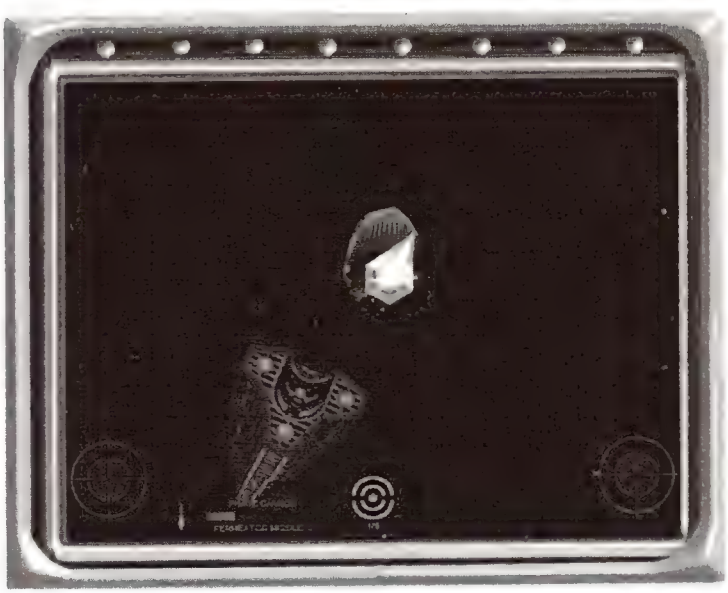
- **If you don't have the component being transported**, you achieve victory by destroying or disabling all the alien ships (except Drones), but leaving the container intact.
- **If you already have the component being transported**, victory is a little more flexible—as long as you destroy or disable everything (once again, excepting Drones), you can either leave the container intact or destroy it as you please.

YOUR REWARDS FOR COMPLETING THE MISSION

- **Doomsday components:** Your reward for successfully completing the first Doomsday freighter mission involving each type of Doomsday component is the capture of the component (which is necessary in order to complete the game).
- **Delaying Doomsday completion:** Each ensuing Doomsday freighter convoy you engage and destroy slows the aliens' progress in completing the Doomsday Weapon.

STRATEGIES

- **Don't try to go it alone.** This mission isn't a particularly difficult one—at least not until Shades start showing up as escorts later in the game—but there *are* a lot of things to do. Take along two wingmen to occupy the enemy fighters while you concentrate on the freighter and the tug.



- **Take out the freighter first.** As always, the

freighter has a chance of jumping to hyperspace, so you should eliminate it first. You'll need to move quickly to catch up with it, and you'll have to fly past the defending fighters to get there. Take out the freighter from maximum missile range to avoid being swarmed by Drones.

- **Take out the tug second.** If you heeded the advice to bring along some wingmen, they should be actively engaging the alien fighters (and vice-versa) by the time you zap the freighter. Once the freighter is dead, swing around and kill the tug. Afterwards, you can help your wingmen with the cleanup work.

- **Watch out for the tug's weapons.** The tug is really slow and isn't particularly deadly, but don't let that lull you into complacency. If you get too close to the tug's bow, it unloads on you with Tachyon Pulsers. Spend too much time in its forward arc, and you might end up disabled.

- **Watch your fire around the container.** The container that houses the Doomsday component isn't particularly sturdy, but it's really big and it's really close to the tug. If you need to capture the container intact, make your attack runs on the tug from the side so that you don't risk destroying the container with stray shots. (Try not to ram the thing either.)

RECON MISSIONS

Recon missions are the second most common side-mission type next to hyperwave anomaly missions. They are by no means critical and can be skipped when you just don't have the time or ships available to take care of them, but the rewards are great enough that you should take them on whenever you can.

In this mission, a corporation from Earth is planning to set up an outpost in the Frontier, but wants X-COM to explore the potential outpost system beforehand to make sure it's secure from alien activity. When the message appears, the system to be explored is marked on the CSD map with a flashing arrow (see Figure 9.1). At this point all you have to do is send a Sensor Probe to the system to check for enemy activity. (Target the probe directly on the star.) If the probe detects something you are notified and you fly the ensuing mission normally.

Figure 9.1

A star system designated for a recon mission

WHEN TO EXPECT THIS SIDE MISSION

Recon missions can happen at any time during the game. They tend to be most common early in the game (when you have few outposts). They also tend to happen soon after you lose an outpost to enemy attack.

WHERE THIS MISSION OCCURS

Recon missions always take place in an unoccupied star system relatively close to an existing X-COM outpost or base.

Note **You need not respond to a recon mission immediately—the mission remains active for several game weeks. As long as the mission is active, the star system remains marked on the CSD map.**

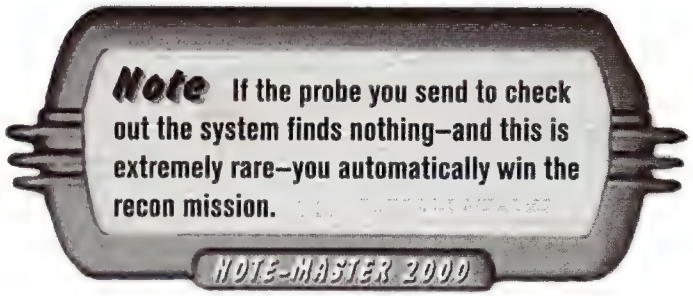
NOTE-MASTER 2000

ENEMY SPECIFICS

The enemy forces you encounter in recon missions vary from encounter to encounter. When the game generates a recon mission, the probe you send to the star system may find one of the following:

- An alien fighter patrol
- An alien freighter convoy
- An alien Sensor Probe
- A pirate fighter patrol
- Nothing

The four mission types are generated just as they are for normal deep-space encounters, freighter-attack missions, probe-attack missions, and pirate raider missions (respectively).



VICTORY CONDITIONS

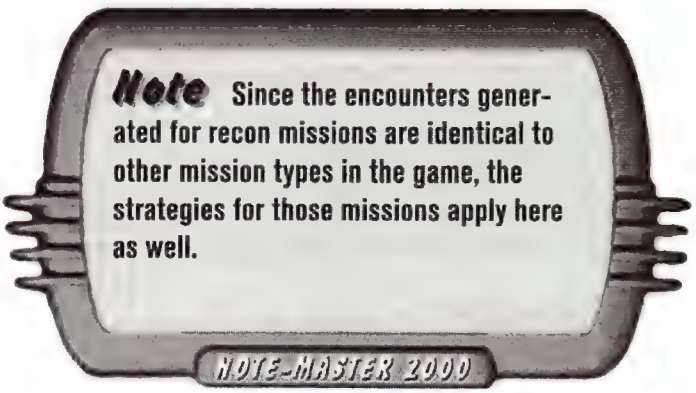
Destroy or disable all enemy targets.

YOUR REWARDS FOR COMPLETING THE MISSION

A new outpost system: When you win the mission, the corporation that ordered the recon mission immediately establishes an outpost in the system.

STRATEGIES

If possible, always respond to recon missions. These missions are usually quite easy, and the reward of a new outpost system is definitely worth the time and effort required.

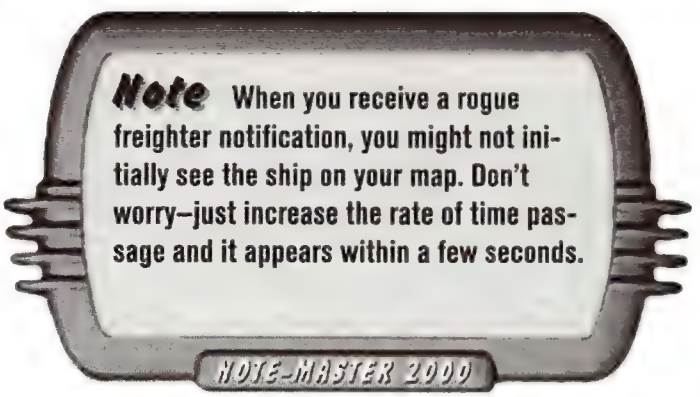


THE ROGUE FREIGHTER

In this mission, the Cult of Sirius—a pseudo-religious group that believes the aliens are mankind's salvation—has hijacked an outpost freighter and equipped it with killer shields and lots of weapons. Escorted by a small fleet of pirate interceptors, the freighter moves from outpost system to outpost system attacking outposts and OPPs until you get around to destroying it.

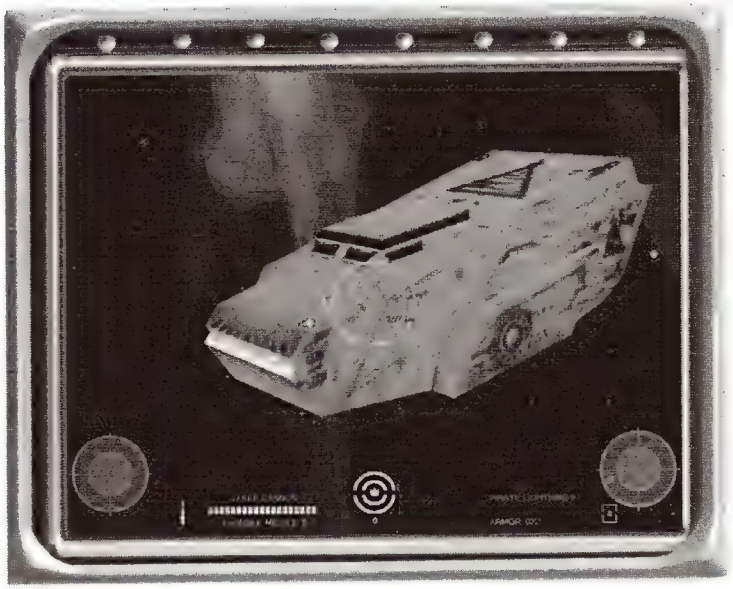
WHEN TO EXPECT THIS SIDE MISSION

The rogue freighter mission can arise at any time during the game, but it is most commonly encountered in the first few months.



WHERE THIS MISSION OCCURS

Rogue freighter missions always occur in or near an outpost system.



ENEMY SPECIFICS

The enemy forces you encounter in the rogue freighter side mission are the freighter itself and its pirate escorts. The specifics for the rogue freighter are as follows:

- **Hit points:** 800
- **Shields:** Deflector Shields
- **Armor:** Standard Armor
- **Weapons:** 4 beam weapon mounts

Pirate interceptors are identical in every way to X-COM interceptors (except for the spiffy paint job). Their equipment loadout is dependent on *your* current level of technology when you encounter them—whatever equipment and weapons you can use, they can use. The number and type of pirate escorts present is dependent on the game difficulty level.

> **Note** At the Beginner and Experienced levels, pirate interceptors do not use armor.
>
> NOTE-MASTER 2000

VICTORY CONDITIONS

Destroy or disable the rogue freighter before it enters hyperspace. (You do not have to destroy the pirate escorts to achieve victory.)

> **Note** If you disable the freighter *after* its hyperdrive is at full power, it can still escape. Tachyon Pulsers disable standard drive systems but *not* hyperdrive.
>
> NOTE-MASTER 2000

YOUR REWARDS FOR COMPLETING THE MISSION

- **Money:** You receive a $250,000 reward for successful completion of the mission.
- **Peace of mind:** Once you eradicate the rogue freighter, this side mission never appears again in the current game.

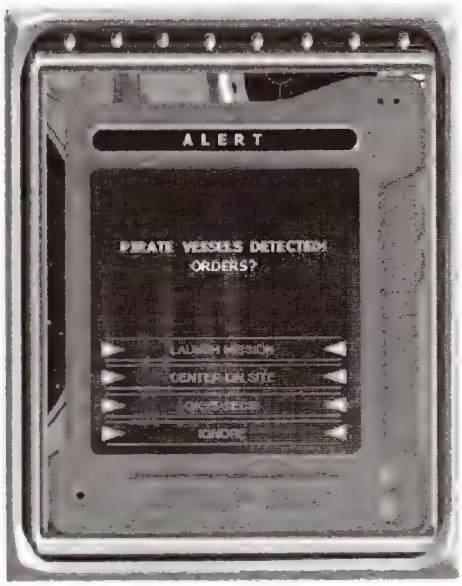
STRATEGIES

- **Respond quickly!** Technically, you *could* just let the rogue freighter wander the Frontier for the entire game. However, that would result in the loss of lots of OPPs along the way. As soon as you are notified of the rogue freighter's presence, find it and immediately destroy it. No sense in letting things drag on.
- **Don't go it alone.** Take at least one wingman with you on this mission. Even at Beginner level you'll need someone to distract the pirates while you attack the freighter. (At higher levels of difficulty, take along a couple of wingmen—pirates are fierce fighters!)
- **Take out the freighter first.** Once again, you have a situation where the freighter is powering up its hyperdrive and will jump out of the battle area within a minute or so if you don't stop it. Let your wingmen handle the pirate escorts while you personally take out the freighter.
- **Watch your approach.** Remember, this isn't your average, ordinary freighter. It has beam weapons that can fire in almost every conceivable direction, so you have to be careful as you close in. Ideally, you should attack from maximum missile range—that way, the freighter's guns will probably never touch you.

Tip **When attacking large targets–freighters and larger–don't count on your wingmen to do the job for you. *Interceptor*'s pilot A.I. is the smartest around, but for some reason the X-COM wingmen just don't do a very hot job attacking the big stuff. Lead the attack yourself and let your wingmen play to their strong suit–fighter-to-fighter combat.**

TIP-O-MATIC

THE KABRON PIRATES



The Kabron Pirates are a loathsome bunch of hoodlums who prey on commercial shipping traffic. They started their careers in Earth's solar system, but the lure of the lucrative mineral trade in the Frontier was enough to draw them into deep space.

You first learn of the pirates when your outpost systems start reporting strange, non-alien fighter traffic nearby. Within a week, you'll start sighting pirate squadrons yourself. The raids continue until you locate the pirates' base of operations and destroy it.

WHEN TO EXPECT THIS SIDE MISSION

The Kabron Pirates mission can arise at any time during game, but it is most commonly encountered in the first few game months.

WHERE THIS MISSION OCCURS

The pirate base is always located near one of your

Tip **To locate the pirate base, note the names of the star systems in the first message indicating pirate traffic. Launch a series of Sensor Probes into the area surrounding those systems. The pirate base is in deep space somewhere near the indicated systems. (See Figure 9.2.)**

TIP-O-MATIC

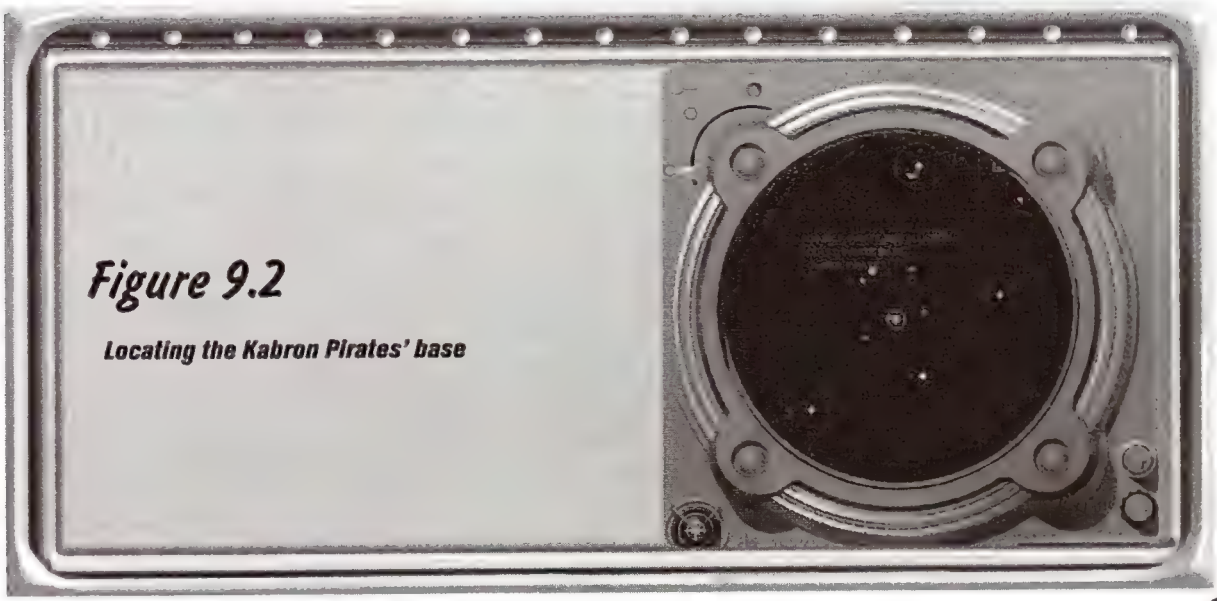


Figure 9.2

Locating the Kabron Pirates' base

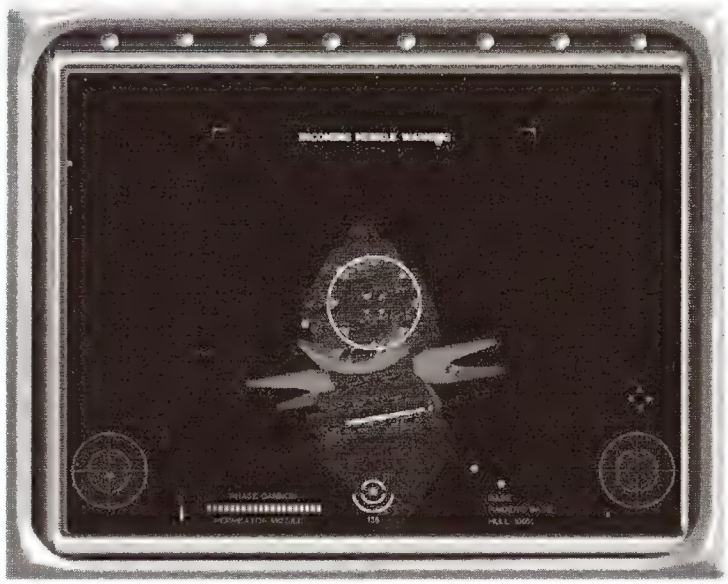
existing outpost systems. Pirate fighter encounters can take place at any location inside star systems or in deep space.

> **Note** This mission can only occur once in each game, and cannot occur after the pirate rescue side mission has taken place.
>
> NOTE-MASTER 2000

ENEMY SPECIFICS

This side mission is really a series of missions, and two distinct mission types are represented. One is a pirate raider mission where you encounter a number of pirate interceptors wandering about or attacking X-COM freighters. These missions are fought as normal deep-space encounters or freighter-defense missions (respectively). The number, strength, and type of pirate interceptors present is dependent on game difficulty.

The other part of the Kabron Pirate side mission is the attack on the pirate base itself. The specifications for the base are as follows:



- **Hull hit points:** 3,500
- **Shield hit points:** 2,000
- **Beam weapon mounts:** Variable in type and number (but there are lots of them)

The number, type, and strength of the force defending the base varies with difficulty and technological levels.

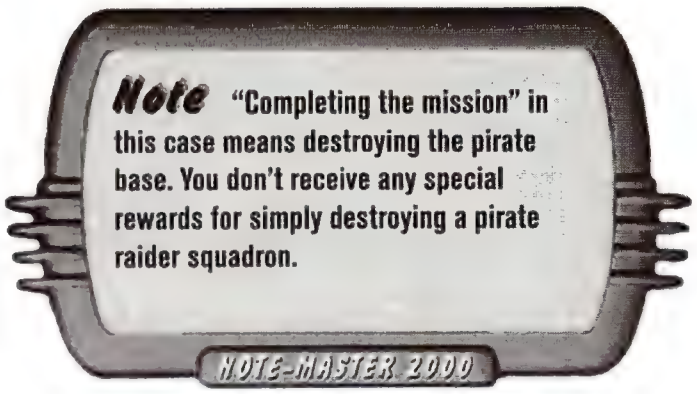
VICTORY CONDITIONS

The victory conditions are different for each mission within the overall mission:

- **Pirate raiders:** Destroy or disable all enemy ships. (This is a temporary victory at best—until the base is destroyed, the pirates continue their operations.)
- **Pirate base:** Destroy the pirate base.

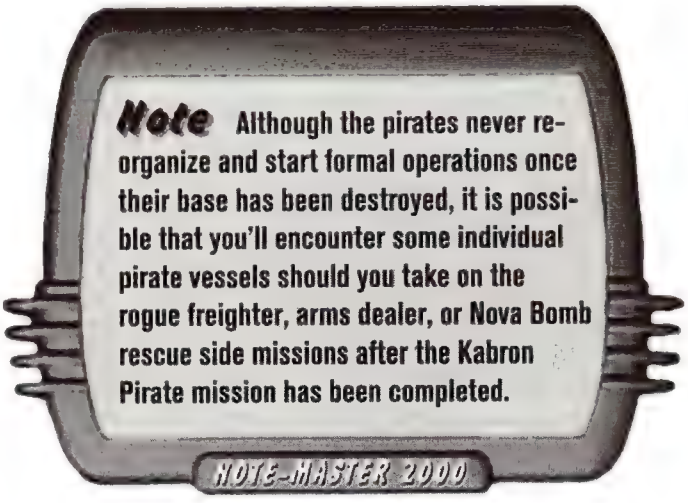
YOUR REWARDS FOR COMPLETING THE MISSION

- **Money:** You receive a $1,000,000 reward for successful completion of the mission.
- **Peace of mind:** Once the pirate base is destroyed, there is no further organized pirate activity in the Frontier for the remainder of the game.



STRATEGIES

- **Find the base right away.** The pirates' base is always right under your nose and very easy to find—if you note the names of the star systems in the first message, that is. Make sure you launch your probes and find the base before you forget where it was supposed to be.



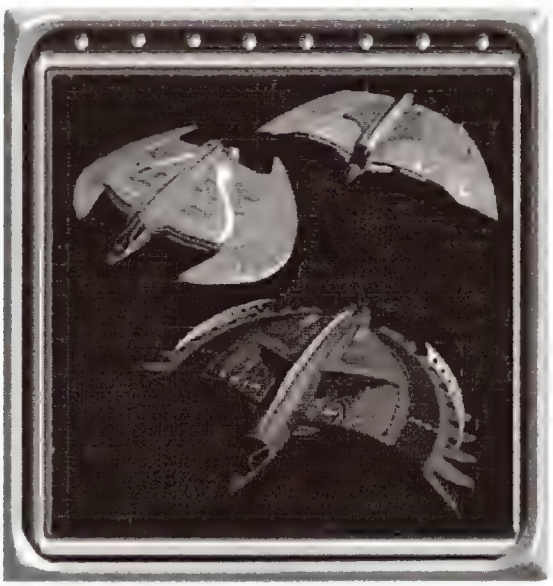
- **Attack the base ASAP.** Until you destroy the pirate base, you'll be dealing with pirate raids right and left. You don't need *that* hassle—it just distracts you from your main task: fighting the aliens.
- **There's safety in numbers.** This is always a good rule of thumb in *Interceptor*, but it's especially true when it comes to pirates. Compared to the aliens early in the game, pirates are vicious! Whereas you can probably handle three-to-one odds in a Lightning II against alien Wraiths in the first couple of game months at the Beginner level, the same is *not* true when you face a pirate force of equal size. Take at least one extra wingman along for pirate raider attacks, and go in full-force (five ships) when you attack the base.
- **Deal with the defenders first, then the base.** The fighting around the pirate base is fast and furious. If you get caught up in trying to launch missiles at the base while there are pirate interceptors around, chances are you'll be space

dust before you know it. Join your wingmen in knocking out the interceptors first, *then* launch your attack on the base.

- **Keep your distance from the base.** The pirate base is well-armed, with an arsenal of state-of-the-art beam weapons just waiting for you to drop into firing range. If at all possible, stay at maximum missile range when you launch your attack on the base. That way you'll be out of its weapons range.

THE PIRATE BASE DEFENSE

The kindness and generosity of X-COM are boundless. The aliens are the common foe of all mankind and when anyone, even an enemy, falls prey to the invaders from beyond, X-COM is there to lend a hand.



Your main encounter with the Kabron Pirates during the game (assuming you *do* encounter them, that is) is either as a group of raiders in a series of skirmishes culminating in the destruction of their base (described earlier) or as victims of an alien attack. Obviously, the encounter is radically different in the pirate-defense mission—you are allied with the pirates against the aliens in this one.

When this side mission is initiated, you are notified in the usual manner and given an immediate opportunity to launch the mission. (If you choose not to launch immediately, you can launch later—but your time is severely limited. The pirate base will be destroyed in short order unless you render aid.)

WHEN TO EXPECT THIS SIDE MISSION

The pirate-rescue mission can arise at any time during the game.

Note This side mission can only occur once during the game, and cannot occur if the Kabron Pirates side mission has already taken place.

NOTE-MASTER 2000

WHERE THIS MISSION OCCURS

As in the Kabron Pirates mission, the pirate base is always located near one of your existing outpost systems.

ENEMY SPECIFICS

Actually, we need to discuss the specifics for both the pirate fleet and the alien fleet. The pirates are limited to just a handful of ships. The types and specifications of the interceptors are based on the usual parameters (as discussed earlier in this chapter). The pirate base specifications this time out are the same as in the Kabron Pirates side mission except that the base's shield generator has been destroyed.

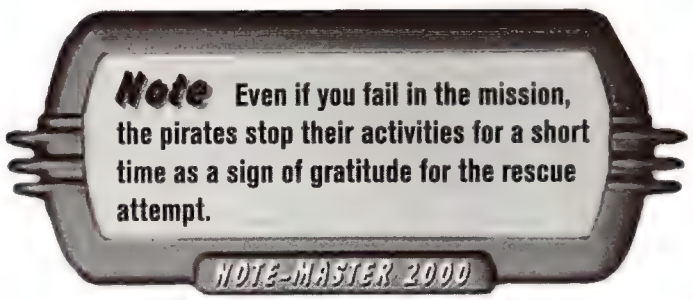
The size and composition of the alien fleet is identical to that of a typical fleet in an X-COM base-defense mission.

VICTORY CONDITIONS

Destroy or disable all alien fighters.

YOUR REWARDS FOR COMPLETING THE MISSION

Peace of mind: If you successfully defend the pirate base, there is no further organized pirate activity in the Frontier for the remainder of the game.



STRATEGIES

- **Launch the mission right away.** If you don't launch as soon as you get the mission prompt, it's unlikely you'll be able to get to the base before the aliens destroy it.
- **Stay close to the base.** The tactics here are very similar to those in other defensive missions. Some of the aliens attempt to draw you away from their objective while their compatriots launch a concerted attack.
- **Watch your aim.** Again, as in other defensive missions, the aliens dive close to the large object in order to avoid weapons fire. Be careful not to hit the base when you are blasting the aliens.

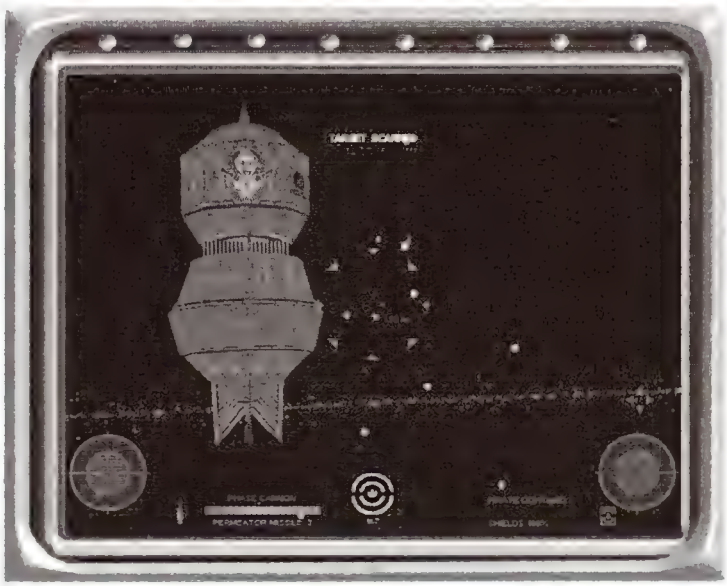
- **(Again) don't go it alone.** When you choose your ships for this mission, your fleet composition should be pretty much the same as when you're defending an X-COM base.

> **Tip** **Honestly, the pirate-defense mission is one of the least important of the side missions. You don't really gain that much by winning—in fact, you stand to gain more by allowing pirate activity to continue in the Frontier and destroying their base yourself! Don't feel too compelled to fly this one if you have something better to do.**
>
> TIP-O-MATIC

- **Don't shoot the pirates!** They're your friends this time, remember?

BUSTING THE ARMS DEALER

Ever wonder what happens to all those weapons you sell to make a few extra bucks each month? Well, now you know. Idnarb Trebor, pan-galactic arms dealer, has been buying up X-COM weapons and selling them to the aliens. This is your chance to catch him in the act and put an end to his nefarious operation.



When you're notified of this mission, the message mentions a star system near which Trebor's base is located. To find the exact position, you'll have to launch a few probes in that direction (see Figure 9.3).

WHEN TO EXPECT THIS SIDE MISSION

The arms dealer mission can arise at any time during the game, but it is most commonly encountered in the first few game months.

Figure 9.3

Finding the arms dealer's base

WHERE THIS MISSION OCCURS

The arms dealer's base is always located near an unoccupied star system not far from X-COM-controlled space.

ENEMY SPECIFICS

The enemy force in this mission is composed of both pirate interceptors and alien fighters. The pirate force is the equivalent of a medium-sized pirate raider squadron; type and load-out of the interceptors are determined by difficulty level and your technology level (as is always true of pirate vessels). The alien force is the equivalent of a small to medium squadron, with the ship types and toughness determined by game difficulty level.

The specifics of the arms dealer's base are as follows:

- **Hull hit points:** 3,500
- **Shield pit points:** 2,750
- **Beam weapon mounts:** Type and number variable (but there are always quite a few)

VICTORY CONDITIONS

Destroy the base.

YOUR REWARDS FOR COMPLETING THE MISSION

Fun and points: All you get is personal satisfaction, along with points for your kills.

STRATEGIES

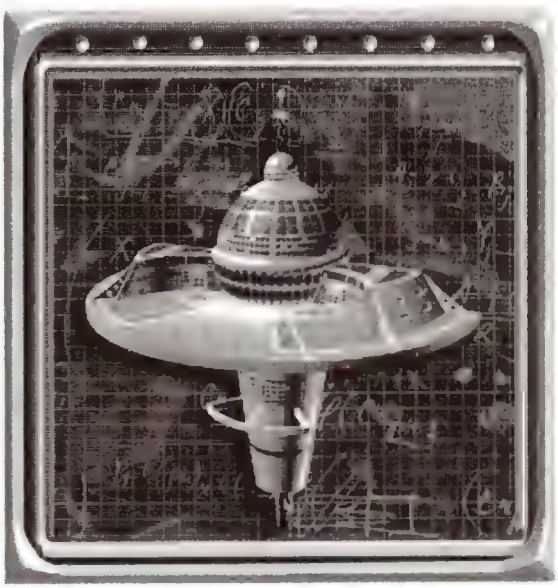
- **Take along lots of wingmen.** The only side mission with a more dangerous complement of defenders is the mission to destroy the pirate base. You'll need all the help you can get.
- **Prioritize your targets.** Always take out the defending ships before you destroy the base—it's safer that way. Attack the pirate ships first, since they're the most dangerous. Then zap the aliens. Finally, take out the base itself.

> **Tip** The best strategy for this side mission is not to fly it. Despite what the briefings and debriefings say, you don't really gain any major benefit from participating in this battle. That arms dealer base sure looks cool, though....
>
> TIP-O-MATIC

RETRIEVING THE HIJACKED NOVA BOMB

There's nothing scarier than having the ultimate weapon of destruction fall into the wrong hands. The Nova Bomb, the most powerful weapon in the galaxy, is one weapon you definitely *don't* want to let get away.

In this mission, some rogue pirates are attempting to grab a prototype Nova Bomb from a GSC science station in the Frontier.



WHEN TO EXPECT THIS SIDE MISSION

The Nova Bomb hijack mission can take place anytime after you research the Nova Bomb, usually within a month or so.

WHERE THIS MISSION OCCURS

The GSC science station is always located in deep space within reasonable flight distance of X-COM territory.

ENEMY SPECIFICS

The Nova Bomb hijacking force is a small- to medium-sized pirate raider squadron. The type, number, and strength of the ships is determined in the normal manner for pirates (described earlier in this chapter).

VICTORY CONDITIONS

Kill all pirate raiders before they can capture the freighter.

YOUR REWARDS FOR COMPLETING THE MISSION

Fun and points: All you get is personal satisfaction, along with points for your kills.

> **Tip** To be honest, there is an extremely easy way to win this mission: Let the freighter die or kill it yourself. The goal is to prevent the pirates from capturing the freighter, but the truth is that they don't really try all that hard to do so. Either way, if you kill the freighter, they can't capture it. "Mission accomplished."
>
> TIP-O-MATIC

STRATEGIES

Respond immediately. You won't get a second chance at this one. If you don't launch your mission as soon as you get the call, you won't make it in time.

THE FINAL MISSION

Well, this is it, the moment you've been waiting for. You've completed all the necessary research. You've decoded all the alien transmissions and you know exactly what they're up to. You also know that, if you don't act fast, Earth and life as you know it will go up in a flash of burning plasma.

What do you do now? Read on and find out.

FINAL ARRANGEMENTS

Before you set out on the final mission, you must take stock of your situation and make sure that you are properly prepared. There are a number of things that you absolutely need to take care of—and a few that you should strongly consider—prior to embarking.

PICKING THE RIGHT PILOTS FOR THE JOB

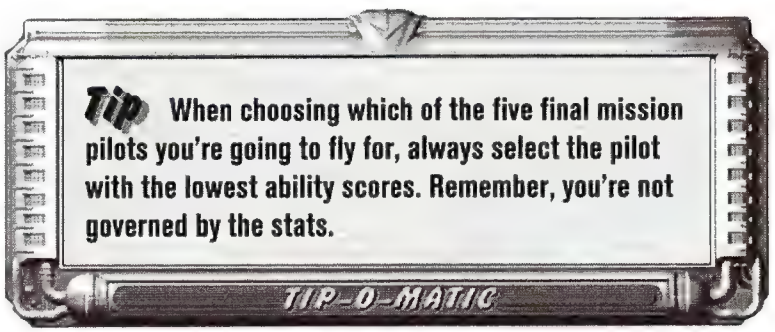
It's a given that you shouldn't attempt to fly the final mission alone—it's the most difficult and dangerous mission of the game, and you probably wouldn't survive more than a few minutes without wingmen. Even if you *did* survive, chances are you wouldn't be able to provide adequate protection for the *MacArthur*. It's a good idea to take the maximum number of ships possible into the final mission. That means yourself and four wingmen.

In this mission more than any other, wingman selection is critical to your success. Choose only the best pilots available to fly the mission. The most important factors to look for are high marks in the following four categories:

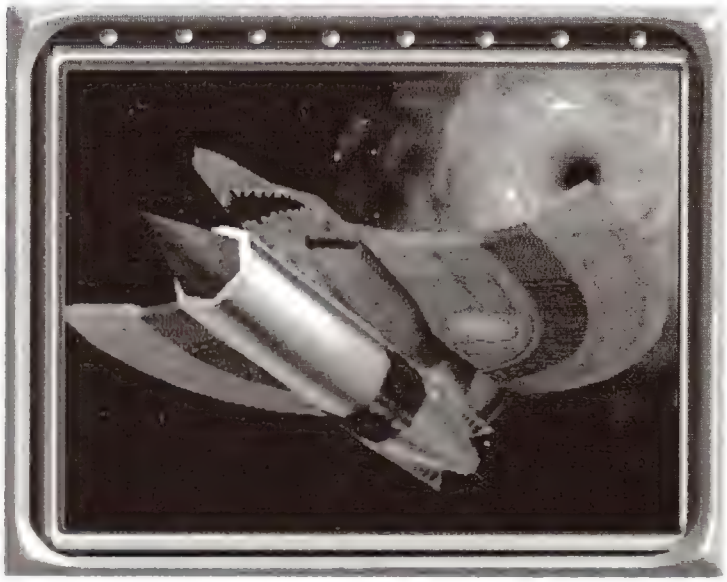
- **Firing Accuracy:** For obvious reasons.
- **Flying Ability:** Ditto.
- **Bravery:** You don't want your pilots running away from the fight at this stage of the game.
- **Psionics:** The aliens are use Psi Blasters regularly in the final battle, and the last thing you need is for your own wingmen to start turning on you.

Another attribute that should be in the high range is Aggressiveness. Although you don't want your pilots to take foolish chances, you also don't want them to make you do all the work. Health is also pretty important—you don't want your pilots dying on you while their ships are still fully functional.

If you don't have pilots who fit these criteria, recruit the best pilots available, sacking some of your existing pilots if necessary. You can't afford to take chances on low-quality pilots on this mission. Once you've chosen (or recruited) your five best pilots, assign them to the ships you intend to send on the final mission.



CHOOSING THE RIGHT SHIPS



There really shouldn't be much question when it comes to picking the ships you take into the final mission. Don't even think of going with anything but the best ships available—and that means Super Avengers with all the trimmings. Design a custom interceptor with the equipment listed for the "Ultimate Fighter" interceptor described at the end of Chapter 5 and build five of them. These are the five ships you should take with you on the final mission.

Tip **All of your ships should be equipped with Nova Bombs in the final mission. When a Nova Bomb is launched, the aliens do their best to destroy it before it can make the jump to hyperspace. If you have five Nova Bombs you have five chances of getting one through to the target.**

TIP-O-MATIC

INITIATING THE FINAL MISSION

You know from perusing Chapter 3 that you have to discover a lot of technologies in order to get to the end of the game but, essentially, most of these technologies are simply part of the long list of prerequisites for the four overriding items you need to set the final chapter of the *Interceptor* saga in motion, namely:

- Alien Hull Alloys (so you can build Super Avengers)
- Alien Message 5
- Dimension Jump Drive
- The Nova Bomb

Once these three topics are in your databanks, you're ready to proceed.

LOCATING THE ENTRANCE TO THE ALIEN UNIVERSE

From the time you researched Alien Message 2, you probably started getting the idea that a black hole figured into the aliens' plans in some way, shape, or form. Well, you're right. As

Alien Message 5 reveals, the aliens are constructing the Doomsday Weapon in a parallel universe that is accessed through a black hole. The question is, where is the black hole?

As the eloquent scientist in Alien Message 5 explains, data has been pieced together to show the approximate location of the entrance black hole. The miniature Frontier map in the message shows the position as a flashing icon (see Figure 9.4).

Figure 9.4

The position of the black hole that leads to the alien universe, as revealed in Alien Message 5

Truth be told, the location is not all that "approximate"—it's pretty much dead-on. The only thing that might throw you off a bit is the scale difference between the map in the message and the actual CSD map.

Note Those of you who skipped right to this section of the guide to find the location of the aliens' black hole gateway, prepare to be disappointed. Because the Frontier is generated randomly at the start of each game, the position shown in Figure 9.4 is certain to be different from the black hole's location in your own game. Sorry. No shortcut here.

NOTE-MASTER 2000

Finding the black hole on the actual CSD map takes a bit of detective work. Find the flashing black hole icon on the map in Alien Message 5, and note the color and position of the stars nearby. Also note the position of your bases in relation to the black hole's position. Once you have a good mental picture of what you're looking for, close the UFOpedia and look at the CSD. Use the small navigation map to locate the landmark star groupings you chose, and scroll the main map to that location. In most cases, you should be able to locate the landmark stars fairly easily. (See Figure 9.5.)

Figure 9.5

Finding the landmark stars from the map in Alien Message 5 (inset) on the actual CSD map

Once you've located the region in question, it's time to start searching for the black hole itself. Don't send interceptors to do the work—in most cases the black hole is pretty far off the beaten track, and it's *always* deep in the heart of alien territory. Instead, fire a bunch of probes in that direction. It might take a little bit of searching, but if you've got your bearings right you should find the black hole in short order. (See Figure 9.6.) A prompt will notify you when your probes have been successful.

Tip **Hunter Probes are ideal when it comes to searching for the entrance to the alien universe. Just a couple of them launched into the target region can do the work of half a dozen or more standard Sensor Probes.**

TIP-O-MATIC

Tip **In some games you might get an unlucky draw—the entrance black hole could be in the middle of nowhere, with no landmarks anywhere nearby. If this is the case, note the approximate angle and distance of the black hole from your nearest base and use that as an estimate of the location. It'll be a little more difficult to find, but it *is* possible.**

TIP-O-MATIC

Figure 9.6

Using probes to locate the entrance black hole

SUMMONING THE MACARTHUR

As Alien Message 5 reveals, the aliens use their Dimension Jump Drive device to enter and exit the black hole—but, unfortunately, Earth scientists have found no way to create a Dimension Jump unit small enough to be mounted on an interceptor. Instead, they have created a large version of the drive and mounted it on a decommissioned *Patton*-class capital ship, the *MacArthur*. In order for your interceptors to get into the aliens' universe, they must be aboard this ship.

As soon as you locate the entrance black hole, you are notified that the *MacArthur* can be summoned. To do so, simply click the Launch Mission button on the CSD and select "Summon MacArthur." Once you confirm the summons, the ship arrives in the Frontier within a week. When the *MacArthur* arrives, a prompt notifies you and gives you the opportunity to immediately launch the final mission. (See Figure 9.7.) If your ships and pilots are ready, there is no reason not to do so. If not, you can cancel the prompt and launch the final mission later through the standard mission-launch sequence.

Note When you first summon the *MacArthur*, you are given the opportunity to send it to any of your existing bases. There is no advantage or disadvantage to sending it to one base over another base. Any base will do.

NOTE-MASTER 2000

Figure 9.7

The MacArthur arrives.

When you choose to launch the final mission, you are prompted to select the ships you wish to take. The Mission Launch window displays a scrolling list of the ships stationed at all of your bases. Select the five you want to take along from this list and click OK. (You can select less than five ships, but you really *should* take the maximum—having less than five ships on the final mission just makes things that much harder.) You are then *immediately* prompted to select the ship you want to fly yourself. Once you click OK again, it's time for the final mission briefing.

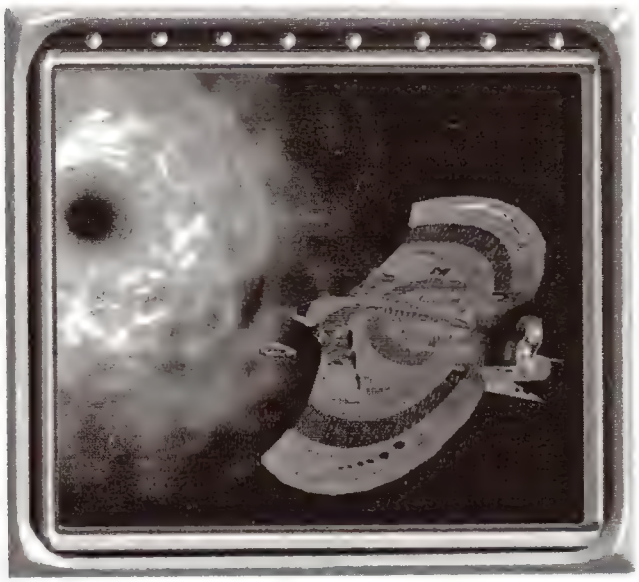
Tip Save your game ***before*** you begin the final mission sequence. There is no autosave prior to the final mission, and you cannot save from the final mission briefing screen.

TIP-O-MATIC

Warning The Cancel button on the final mission briefing is disabled, so if you don't want to fly the final mission, don't start launching it. Once you proceed to the briefing, it's too late to turn back.

WARN-TRON

FINAL MISSION PART 1—OUTSIDE THE BLACK HOLE



Before you can go in and launch your assault on the aliens' universe you have to clear a path for the *MacArthur*'s passage through the black hole. Remember all those alien fighters you saw guarding the black hole way back in Alien Message 2? Well, you're about to meet them.

ENEMY SPECIFICS

As if having to fly through a black hole isn't enough of a deterrent, the aliens have posted a huge flotilla of ships outside the entrance to their universe to prevent you from even getting *to* the black hole, much less *through* it.

The number and type of alien ships present in the first half of the final mission vary according to game difficulty level, as shown in Table 9.1. The alien vessels are deployed at varying distances roughly between the *MacArthur* and the black hole. (See the deployment illustration in Figure 9.8.)

Table 9.1: Number and type of alien ships in the first half of the final mission (by game difficulty level)

Difficulty Level	Wraiths	Spectres	Phantasms	Shades
Beginner	3	2	2	1
Experienced	4	3	2	1
Veteran	4	3	3	2
Genius	5	4	3	2
Superhuman	5	4	3	2

Note Of course, the usual rules for how ship strength varies by difficulty level (discussed in Chapter 1) apply here as well.

NOTE-MASTER 2000

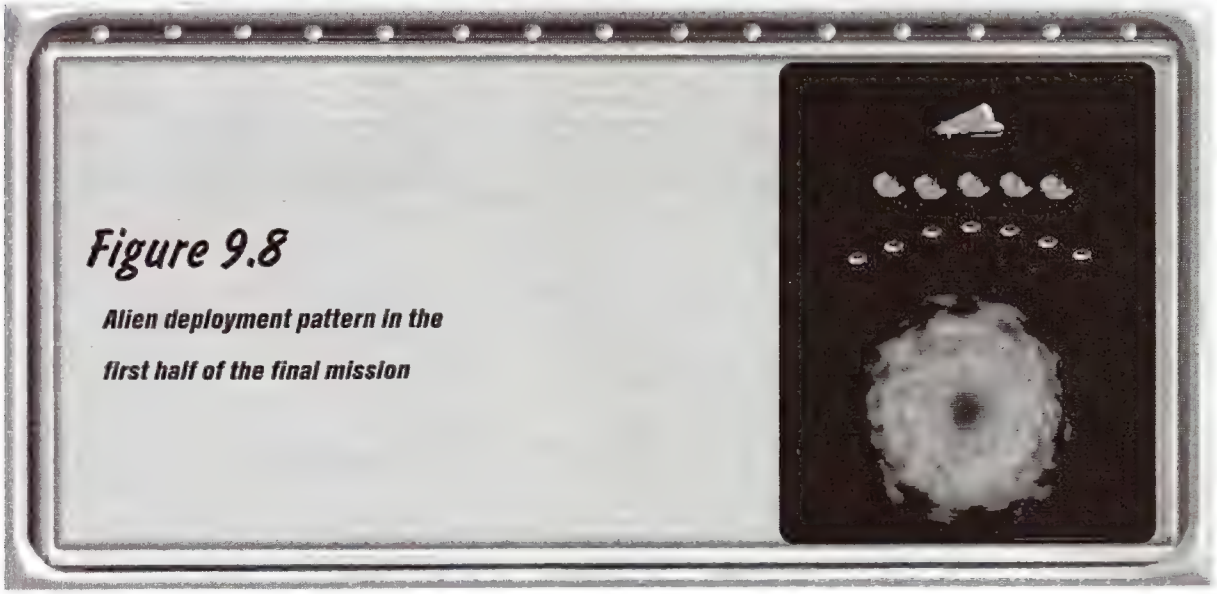


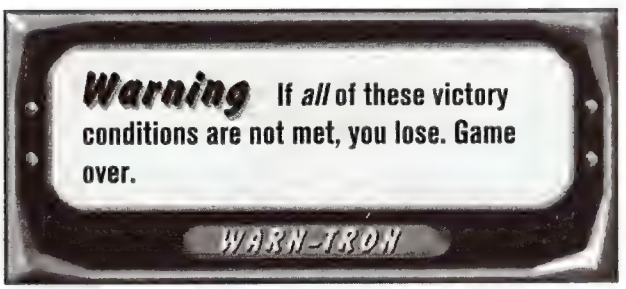
Figure 9.8

Alien deployment pattern in the first half of the final mission

VICTORY CONDITIONS

There are several victory conditions for this part of the final mission, *all* of which must be met for you to make it to part II:

- All alien ships must be destroyed or disabled.
- You must prevent the destruction of the *MacArthur*.
- At least one Super Avenger armed with a Nova Bomb must survive.



STRATEGIES

When it comes down to it, the combat in part I of the final mission is just a deadly free-for-all—a deep-space encounter with a huge alien fleet. There are, however, a number of important things to keep in mind and a few interesting and effective strategies you can employ.

- **Protect the *MacArthur* at all costs.** The *MacArthur* is your only means of getting through to the aliens' universe—and the aliens know it! Send your wingmen out to attack the alien fleet while you stay close to the *MacArthur* and stave off all alien bombardments. As you chase nearby enemy targets, periodically check your distance from the *MacArthur*—the aliens will attempt to pull you away while their companions move in for the kill.

- **Beware the black hole.** Chances are you've never fought a battle near a black hole before this point, so this part of the final mission is a crash-course in wrestling with gravity in combat. (Shut down your throttle and watch your velocity gauge—you'll notice that you're not quite standing still.) The closer you get to the black hole, the stronger the gravity—and hence, the more difficult it is to pull away. Get too close and your ship starts taking massive damage. Get a little beyond *that* point, and you cannot escape—your ship blows up and you die.

> **Tip** One effective way to keep the *MacArthur* safe while you chase down the aliens is to lay a field of Passive Cloaking Torpedoes near the ship soon after the battle begins. The timing is tricky—the torpedoes only remain active for 45 seconds after they're launched—but if you get it just right, the aliens will have quite a surprise waiting for them when they move in to attack.
>
> TIP-O-MATIC

> **Warning** The point of no return for a Super Avenger equipped with Graviton Pulse Drive (plus afterburners) is approximately 20 kilometers from the *MacArthur* in a straight line. Keep an eye on your distance from the *MacArthur* and the size of the black hole. If the black hole is just about filling your viewport and/or the *MacArthur* is more than 15 kilometers away, turn your back to the black hole and fly like hell away from it!
>
> WARN-TRON

- **Shepherd your wingmen.** As usual, when combat begins your wingmen take off after their respective targets and do their best to complete the mission. Unfortunately, part I of the final mission is one place where the wingman A.I. will eventually fail you. As the battle wears on, desperate alien

> **Tip** Even if your wingmen are told to ignore a target, they'll eventually go after it again when there's nothing better to do. One interesting technique you can try is to target the *MacArthur* and command all your distant wingmen to attack it (they tend to follow orders blindly). Once they reach close range, countermand the order by telling them to ignore the *MacArthur*. It's kind of a cheap trick, but it's really the only way to call all your wingmen in to a central—and safe—location.
>
> TIP-O-MATIC

pilots start making a beeline for the black hole in an attempt to escape. Should your wingmen be tracking one of these escaping targets, they will follow the alien right into the black hole's gravity well and die. Throughout the battle, monitor the distance of all the alien ships by cycling through your targets. If you notice any aliens that are at extreme range—say, more than 12 kilometers or so—give your wingmen orders to ignore that target. This is a very important task and one that you should not neglect.

FINAL MISSION PART II—LAUNCHING THE NOVA BOMB

This is it: The battle to end all battles. The deciding conflict where your combat skills will decide whether the alien plan stops here or the human race comes to a violent and painful end in a final, bright, deadly flash.

The fate of Earth is in your hands. Good luck!

ENEMY SPECIFICS

This mission sports the largest alien fleet you've encountered to date. Spread across this battle area are no less than seven alien squadrons, an alien base (often stocked with reinforcement fighters) and—in some cases—a huge minefield. What a mess! How will you ever survive (much less fire the Nova Bomb)?

Table 9.2 shows the distribution of alien ship types inside the alien universe at each difficulty level. It also shows whether alien fighters are docked inside the base and whether or not a minefield is present.

Note **After you successfully complete part I of the final mission, the game automatically rearms all of your ships with their original loadout of weapons. At the lower difficulty levels, the game also repairs any damage your interceptors suffered in the first half of the mission.**

NOTE-MASTER 2000

Table 9.2: Number and type of alien forces present in part II of the final mission (by difficulty level)

Difficulty Level	Wraiths	Spectres	Phantasms	Shades	Reinforcements Available?	Minefield?
Beginner	3	2	2	1	No	No
Experienced	4	3	2	1	Random	Random
Veteran	4	3	3	1	Random	Random
Genius	5	4	3	2	Yes	Random
Superhuman	5	4	3	2	Yes	Yes

The alien squadrons are always distributed in the same pattern. All enemy ships and the base itself are (roughly) between the *MacArthur* and the star. Figure 9.9 shows the squadrons' arrangement and the relative distances at which they are deployed from one another and from the *MacArthur*'s entry point.

Note The armament of the base varies depending on the difficulty level and some random factors. Suffice it to say that the base is very well defended.

NOTE-MASTER 2000

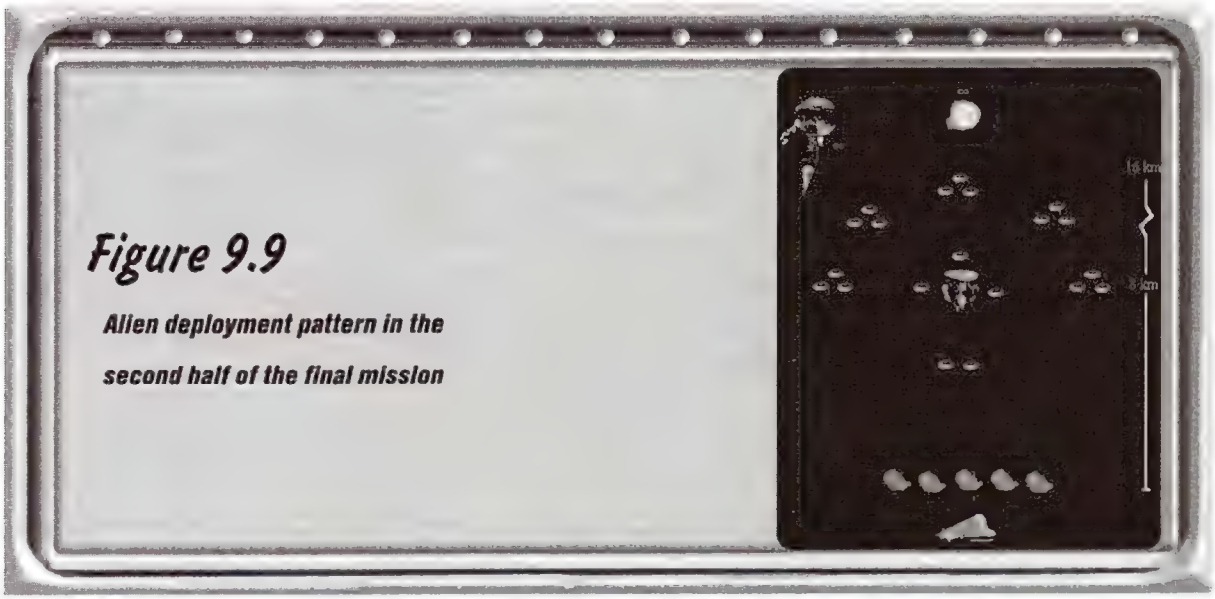


Figure 9.9

Alien deployment pattern in the second half of the final mission

VICTORY CONDITIONS

There are two levels of victory you can achieve in part II the final mission: total victory and partial victory.

To achieve total victory, you must

- Prevent the destruction of the *MacArthur*
- Fire a Nova Bomb and have it successfully enter hyperspace

- Return to within 1000 meters (one kilometer) of the *MacArthur* and press H to end the mission

To achieve partial victory, you must

- Fire a Nova Bomb and have it successfully enter hyperspace

The mission ends automatically (with a losing result) if either of the following events occur:

- The last Nova Bomb (or the ship carrying it) is destroyed
- Your ship is destroyed

Note Yes, that *is* the Doomsday Weapon lurking out there in the distance. Even though it appears as part of your targeting cycle, you can't fly to it and you can't shoot at it directly. Don't even bother trying.

NOTE-MASTER 2000

Note As long as the Nova Bomb has reached full velocity and you have received the "Mission Accomplished" message, you win the mission *regardless* of whether you personally survive.

NOTE-MASTER 2000

Note There is no way to replay just this part of the mission—you have to start all over again from the game you (hopefully) saved before launching the final mission.

NOTE-MASTER 2000

STRATEGIES

- **Protect the *MacArthur*.** No, it isn't mandatory that the *MacArthur* survive this part of the mission—even if it's destroyed, you can still win as long as the Nova Bomb makes it to full velocity. Of course, partial victory is never quite as satisfying as *total* victory, keep the *MacArthur* safe.
- **Avoid the base at all costs.** If you've ever had the opportunity to attack an alien base, you already know how difficult it can be. Save yourself some

Tip To eliminate the immediate threat to the *MacArthur*'s safety, attack the small squadron of aliens closest to your starting position right away. Their primary mission (as long as there isn't a Nova Bomb in the air) is to destroy your only means of escape.

TIP-O-MATIC

time and effort and keep your distance from the base in this mission. You don't need to destroy it in order to win, so why take the risk?

- **Get in the clear before attempting to fire your Nova Bomb.** The Nova Bomb has more hit points than any other type of missile in the game, but even so it can't stand too many hits. If you fire the bomb while you're in the midst of a cluster of enemy ships, chances are it'll be destroyed within a couple of seconds.

- **Shepherd the Nova Bomb.** The aliens in this mission know exactly what you're up to. They'll act normal enough during a dogfight, but just watch what happens when there's a Nova Bomb in the air! The Nova Bomb is the aliens' primary target and they'll do everything they can to destroy it. Your best bet is to stay alongside the Nova Bomb at least until it makes its first major acceleration (you'll know it when it happens). Once this occurs, if there are no enemy ships within a few kilometers, the Nova Bomb is fairly safe and you can start back to the *MacArthur*.

> **Tip** Ideally, you should attempt to get past the three alien squadrons stationed beyond the base before you attempt your Nova Bomb launch. It might be hard to get out that far, but you're almost guaranteed to get the bomb through from that position.
>
> TIP-O-MATIC

> **Tip** Because your wingmen never follow and protect a Nova Bomb after they launch it, you stand a much better chance of success if you launch the weapon yourself.
>
> TIP-O-MATIC

- **Don't get too far from your means of escape.** There is only one way to get out of this mission alive—return to within one kilometer of the *MacArthur* and hyperspace out. This is the catch-22 of the final mission. The farther away you are from the aliens, the better your chances of getting the Nova Bomb through—but the farther you are from the *MacArthur*, the slimmer your chances of making it back before the Nova Bomb explodes. Your best bet is to follow the advice given earlier—stay with the Nova Bomb until it makes its first major acceleration (when the computer announces 30 seconds to Nova Bomb full velocity), then turn back and hightail it to the *MacArthur*. Provided there are no aliens in the immediate vicinity of the Nova Bomb at the time, it should get through—and you'll have a full minute and a half to get back to the *MacArthur*.

Tip **Assuming you have Graviton Pulse Drive, move at full velocity (zero power to shields and weapons) and use up all available afterburner power (including shield power, assuming you start with a full charge on both shields and weapons), and have *no* missiles onboard, your maximum travel range in one and a half minutes is just under 57 kilometers. That may sound like a lot, but it assumes that you can travel in a straight line and don't need your shields to deflect enemy fire. With all the deviations you're likely to make along the way, you'll be lucky if you can actually travel more than about *20* kilometers in the allotted time. Plan accordingly when you're deciding when to turn back to the *MacArthur*.**

TIP-O-MATIC

Nova Bomb Strategies

Here are a few offbeat strategies you might want to try with the Nova Bomb:

- **Launch the bomb immediately upon entering the mission,** or order one of your wingmen to do so. This hardly ever works at the higher difficulty levels, but it has a semi-reasonable chance of working at Beginner level.
- **Overwhelm the aliens with multiple targets.** Every Nova Bomb in the sky is a priority target for the aliens, but there are only so many aliens to go around. Try ordering all your wingmen to launch their Nova Bombs simultaneously, then launch your own weapon and escort it. There is a reasonable chance that the aliens will be so busy with the first four Nova Bombs that they won't have enough fighters left to pose a threat to your own.
- **Launch Nova Bombs as decoys.** Since the aliens are so gung-ho about chasing Nova Bombs, you might want to use this to your advantage. If the dogfight gets too intense, have one of your nearby wingmen launch a Nova Bomb. This should draw the attention of most of the nearby enemy ships and give you a breather. Sure a Nova Bomb's an expensive decoy—but who can put a price tag on survival? Besides, you might get lucky and the Nova Bomb might succeed. (Stranger things have happened....)

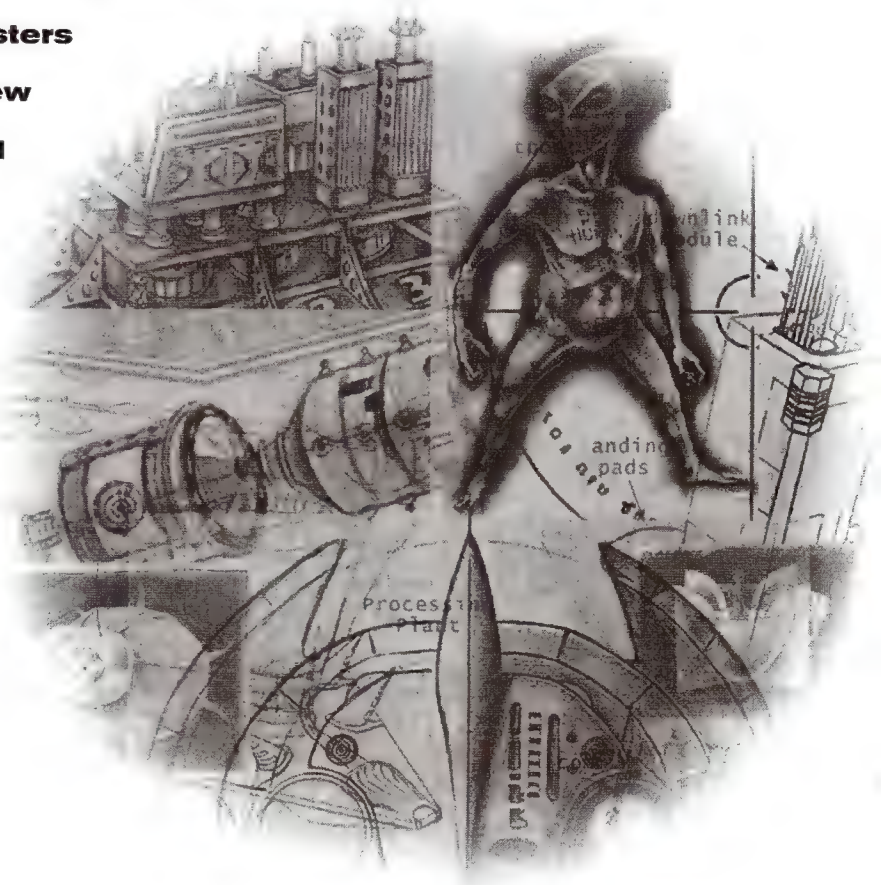
Chapter 10

THE MAKING OF X-COM INTERCEPTOR

THE X-COM UNIVERSE almost didn't exist—at least not in the United States.

Back in 1994, the procedure for European third-party games was to send a pre-beta copy of the software to the U.S. for evaluation. If the game was deemed fun, it would be recommended for U.S. publication. If not, it would be published only in Europe.

When the pre-beta copy of *UFO Enemy Unknown* (the European title of the game that eventually became known in the U.S. as *X-COM UFO Defense*) made it into the Quality Assurance department in MicroProse's Hunt Valley, Maryland studio, the QA director at the time almost passed on it. Only the insistence of the testers who played the game for a few days swayed his opinion and convinced him to recommend the game for publication. *UFO Defense* went on to become *Computer Gaming World*'s Strategy Game of the Year.



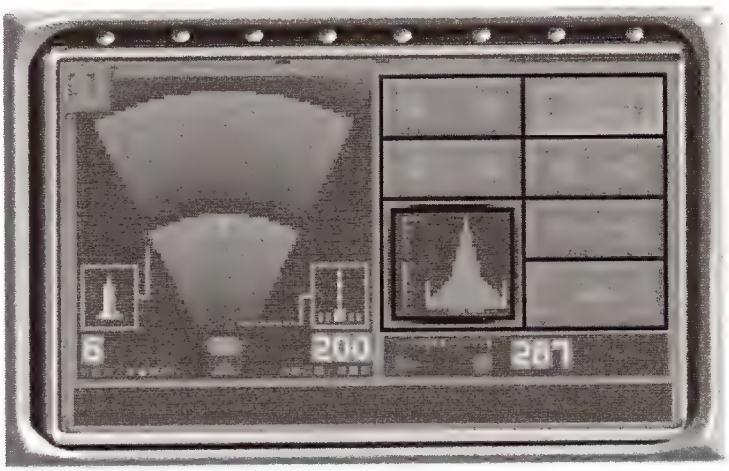
And so it began. Today, there are over half a million copies (combined) of *UFO Defense* and its two sequels, *X-COM Terror from the Deep* and *X-COM Apocalypse,* in circulation throughout the world.

MicroProse obtained the rights to the X-COM license from Mythos Games shortly after the release of *Apocalypse*. Shortly thereafter, preproduction began on the next X-COM title—a game that would retain the strategic flavor of the first three games, but approach the combat side of the game from a totally different perspective.

Thus began the production of *X-COM Interceptor*, the latest installment in the X-COM universe saga.

INTERCEPTOR'S ORIGINS

The original seed of the *Interceptor* idea came from a hallway conversation in 1995. A few of us in Hunt Valley were talking about how cool it would be to expand on the interception portion of *UFO Defense*—to actually jump into the cockpit and shoot down UFOs. We jotted down a few notes for what was essentially a scripted flight sim set in the same time period as the first game. This idea languished in a file drawer in my cube for over a year.



In early 1996, MicroProse's Chapel Hill, North Carolina studio was looking for a new project. As the studio's designer, I was asked to submit some proposals. I figured this might be a good time to revisit the *Interceptor* proposal, so I looked at what was there. Immediately, I realized that there was something missing. The heart of all the X-COM games was research and strategy, but a scripted flight sim had none of that. It was just a 3D space combat game with the name "X-COM" slapped on it, and that just wouldn't do. I rewrote the proposal with this in mind. What I came up with was a design for a type of game I'd always wanted to play.

I've always been a rabid fan of the space flight action of games like *Wing Commander* and *X-Wing*, but the linear mission progression was always something that bothered me. There was no sense that what was accomplished in each mission had any bearing on the game universe. You *had* to win the mission—otherwise, the story wouldn't continue. What I wanted was a game where every mission counted, and if you lost there were some real consequences—things you'd have to deal with in the next mission down the line.

The design finally submitted for *Interceptor* was one that accomplished this using a strategy and research layer (modeled closely on the strategy section of *UFO Defense*, the development team's favorite installment in the series) to drive the plot of a 3D space combat game.

PHASES OF DESIGN

The process of fleshing out the idea for *Interceptor* was pretty easy. Once the development team in Chapel Hill was sold on it, we put together our initial proposal in short order. The hard part of the process is to get the *company* to buy into the idea. They're the ones with the money, and if they say no, then it's back to the drawing board.

To get the go-ahead on *Interceptor*, we had to go through a three-step approval process, each of which involved various levels of documentation and general showmanship. It all began in July, 1996 with a formal proposal of the idea and an extremely simple 3D space flight demo, where you could steer around the screen and shoot little polygonal missiles (that went "booooing") at Klingon and Romulan 3D starship models we borrowed from Spectrum-Holobyte's *Final Unity* game. Just a general idea and a simple demo, but it got us moving in the right direction. We were given the go-ahead for the next design phase.

The second meeting, which took place several months later, was a lot more in-depth. We had to present the game in more detail, describing all the features we intended to include and explaining how things would generally work. The powers that be were a little uncomfortable with some of our ideas at this point—being optimistic and more than a little new at this, we were kind of promising the world. The excess features were things that we could pare down, though. The thing that made everyone the most nervous was the "two engine" nature of the game—the marriage of a strategy/resource-management game to a 3D space combat game was something that had never been done before (at least not successfully). We were insistent, however, that the concept was a sound one, and we got the nod to go into full preproduction.

The preproduction phase, or Phase III as it's known, took 11 weeks. This was the most important time for the project—based on the Phase III presentation, the company decides whether to fund the project or let it die quietly on the boardroom table. For this phase, I had to have the entire game design on paper—every weapon defined, every research item accounted for, every screen described in full. The artists had to create prototypes of every game screen, storyboard every animation, and sketch every object in the game. Meanwhile, the programmers had to put together working technology prototypes of both the strategy and 3D game engines (Figure 10.1).

An 800-page design document, hundreds of sketches and drawings, two prototype game engines, and one two-hour presentation later, *X-COM Interceptor* was given the final go-ahead. Production on *X-COM Interceptor* formally began in March, 1997.

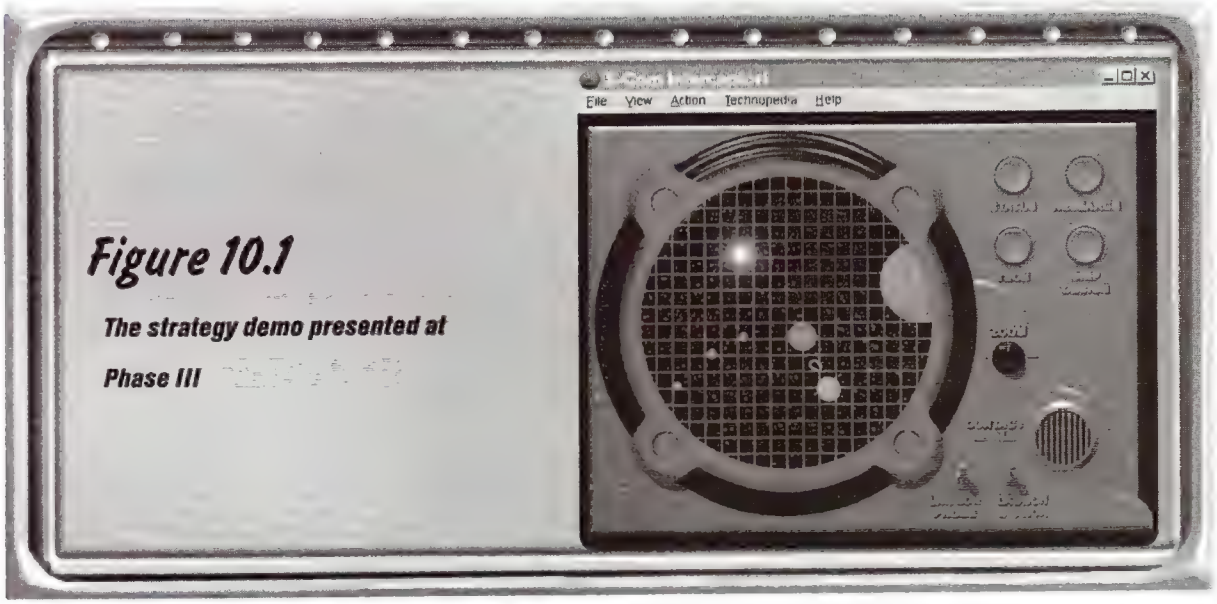


Figure 10.1

The strategy demo presented at Phase III

ENGINEERING THE FRONTIER

We knew from the start that *Inteceptor* would present an engineering challenge. We were basically building two game engines from the ground up. And it wasn't just the mechanics of the engines, either. In addition to creating all the user interfaces, research trees, and so on for the strategy side and all the cockpit interfaces and space flight physics for the combat side, we had to create two different and distinct sets of artificial intelligence.

The design document acted as a starting point for all of the game systems. In the document, I explained how I envisioned that everything in the game should work. In some cases, I went into excruciating detail, while in most areas I defined general processes and left it to the ingenuity and creativity of the programmers to come up with the specifics. Both A.I.s and the space flight model were good examples of the latter—the design document defines general parameters, and the programmers worked their magic to create the systems and behaviors that make the game tick. Even the user interface, which was defined down to the last button and message prompt in the design document, went through extensive programmer revamping to make it work and flow properly. Sometimes it's just not possible to envision every contingency on paper....

One of the engineering edicts that made things easier throughout development (but especially in the beta test phase) was that many of the major game functions should input their data from text files. These files were easily editable, making it possible to quickly test issues concerning game balance, such as weapon power, shield strength, ship performance, research prerequisites, and so on. This saved a lot of time and allowed me to make simple changes while the engineers concentrated on more important issues. All of the in-game text is also read in from a text file, making editing and translating easy.

SOUND DECISIONS

One of the elements of a game that often goes unnoticed or is taken for granted is sound. This was not the case in *Interceptor*. From Phase II on, the sound department was kept in the loop, and had input on both sound and other design issues. (Though, admittedly, we *did* drive them crazy toward the end of the development cycle—changing interface elements and unfinished animations were headaches for the sound guys in the last few harrowing weeks of beta testing.)

One of the most notable sound-related game features is the huge volume of pilot speech. There are ten pilots in all, each of whom has 60 different lines of speech. This provides *Interceptor* with a level of audio variety that rivals any other space combat game currently available. It also provided a real challenge in speech processing, especially since the sound department had to match all 600 lines of speech to the visual element of the pilot communications—a task that took weeks to complete.

Alien speech processing for cockpit taunts and animations was also a challenge. Five separate alien languages were created exclusively through the use of sound processing. (All of the alien speech was recorded in English. See "*Interceptor* Fun Facts" later in this chapter if you want to know what the aliens are gibbering at you.) The end results are pretty convincing.

Then there's music. There are three distinct music elements in the game. First, there are the CD audio tracks that play in the strategy section of the game. These tracks, which everyone in the sound department had a hand in creating, were composed to evoke the same dark, mysterious mood conveyed by the music in *UFO Defense*.

Second, there is the dynamic in-flight music system. Using a tool designed and built by the programming team, Roland Rizzo in the Hunt Valley sound department created multiple musical themes. These audio tracks are divided into three segments of increasing intensity—flight, danger, and combat—and then subdivided into 15-second loopable clips that are repeated and changed on the fly to match the mood and intensity of the combat.

Finally, there is the animation background music. All of these tracks were composed in the 11th hour, near the end of the beta test process. As the artists completed each animation, the music and sound effects were created and added in a matter of days. Despite the short

time available, the end result is a set of musical scores that evoke the proper mood in the best cinematic tradition.

THE ART OF *INTERCEPTOR*

One thing that was almost universally left *out* of the design document was the look of the game. The team decided early on that *Interceptor* would have the same sort of retro, "1950s high-tech" look as *Apocalypse*, but would follow in the footsteps of *UFO Defense* in tone and mood.

THE "RETRO" LOOK

The science fiction movies of the 1950s played a major role in the design of many of the game's visual elements. The control panels in the strategy section, for example, sport lots of dials, knobs, and switches rather than touch panels and computer graphics. There are also lots of spinning and flashing things that serve no apparent purpose except to make things look complex and technologically advanced (a mainstay of classic science fiction cinema). To make the picture complete, many panels are adorned with corporate logos—lots of "-omatics" and "-trons"—that just scream '50s futuristic. (See Figure 10.2.)

Figure 10.2

Logos and doodads of the future

The retro look carried over into the cockpits as well. While X-COM's ships are obviously filled with every high-tech system known to man, these instruments are set into what could only be the dashboard of a '57 Chrysler (Figure 10.3).

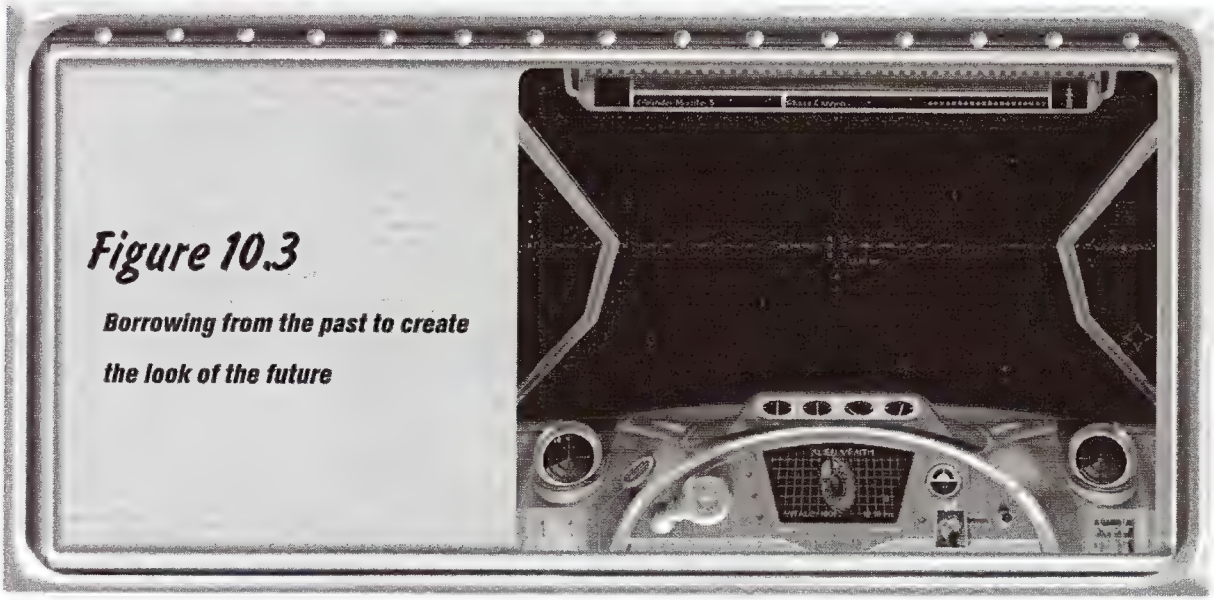


Figure 10.3

Borrowing from the past to create the look of the future

ANIMATIONS

The production team decided from the beginning that *X-COM Interceptor* was not to be a cinematic showcase filled with full-motion video cut scenes. Our goal was to let the game unfold on its own, with strategically placed animated cut scenes thrown in to emphasize key events and convey important elements of the back story.

To that end, six cut scenes and four longer animations were to be incorporated in the game. (In the end, we actually had *five* long animations—the partial-victory animation was added late in development.)

Unfortunately, even with this (seemingly) modest amount of animation, our original time estimates were way off. The five alien transmission messages—key to the plot of the game—were completed first. Based on the amount of time these took and the amount of game art that still remained to be completed, we were forced to shorten and cut back on some of the more elaborate scenes in the opening and closing animations. (See "*Interceptor* Fun Facts," later in this chapter, for some of the stuff that got left out.)

Even so, the end results are excellent.

FROM CONCEPT TO COMPLETION—AN INTERCEPTOR *SKETCHBOOK*

During the extensive preproduction phase of the game, every piece of game art had to be designed and sketched. Many of the objects went through constant redesign throughout the early stages of development, while others took shape instantly and remained almost unchanged in the final game.

Figures 10.4 through 10.8 show the evolution of some of the more prominent artistic elements of the game.

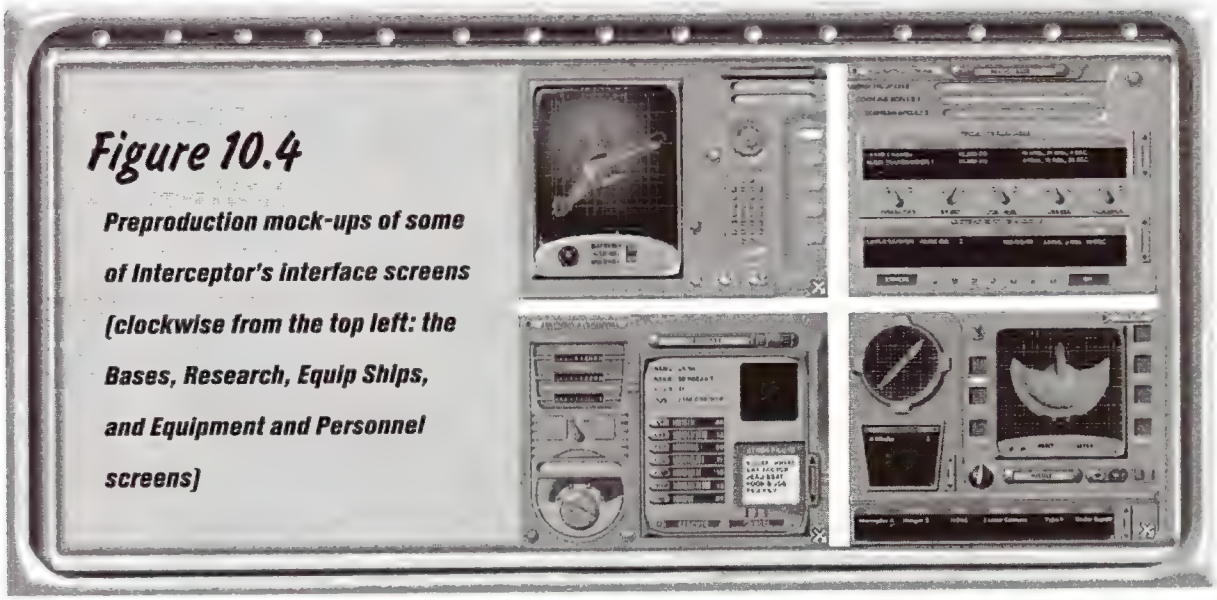


Figure 10.4

Preproduction mock-ups of some of Interceptor's interface screens (clockwise from the top left: the Bases, Research, Equip Ships, and Equipment and Personnel screens)

Figure 10.5

Some alien ships that never made it into the game

Figure 10.6

Early concept sketches of the X-COM base

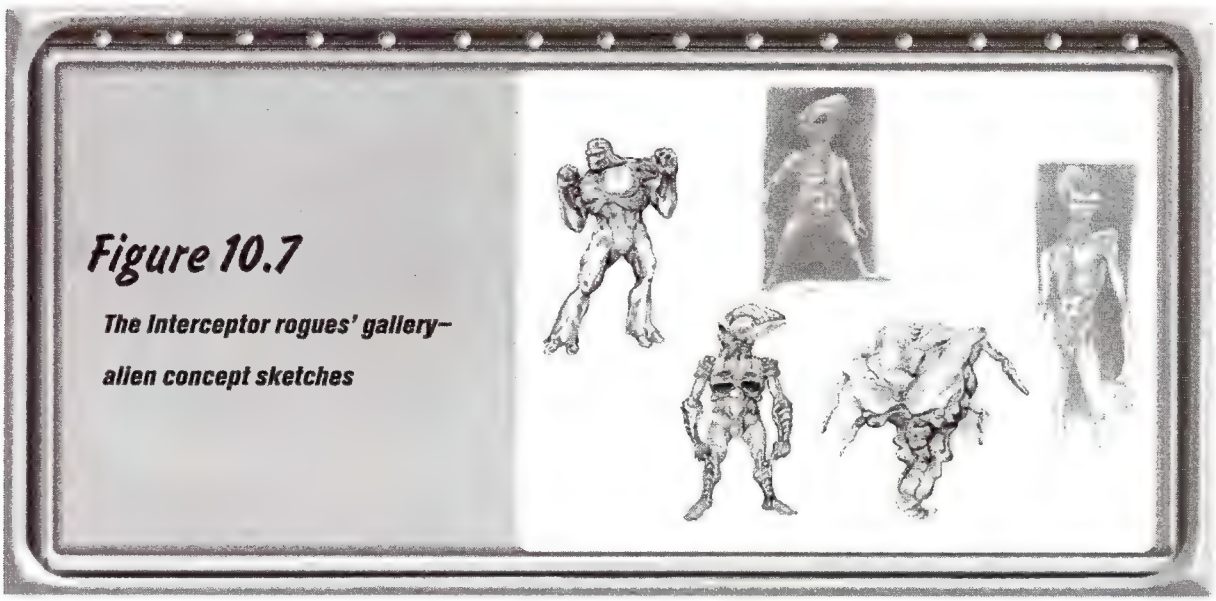


Figure 10.7

The Interceptor rogues' gallery—alien concept sketches

Figure 10.8

Designing the look of the X-COM fleet

INTERCEPTOR FUN FACTS

Despite the immense pressure, the long hours, and the harrowing schedules, creating computer games is actually a lot of fun. If the development team has fun, it shows in the final product. If the development team gets a little wacky from sleep deprivation, that shows too—but in more subtle ways.

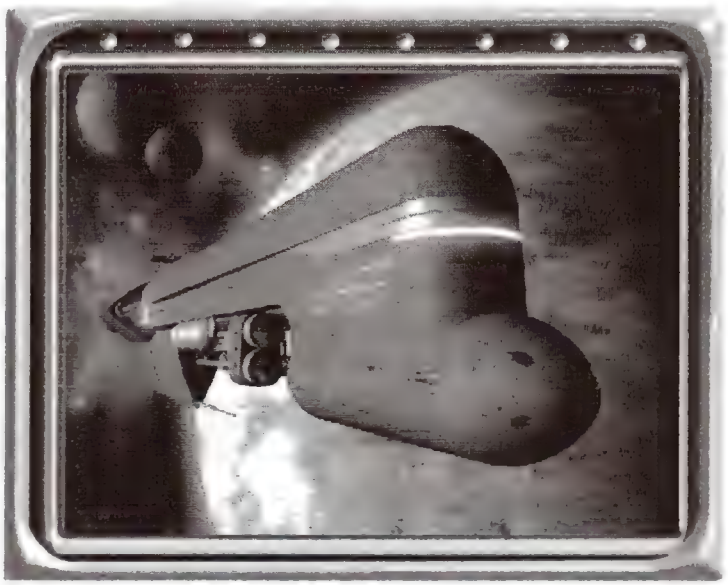
This final section points out some of the fun facts regarding *Interceptor* that you may not notice in the normal course of the game, and a few things that you never got a chance to see because they ended up on the virtual cutting room floor.

DID YOU KNOW...

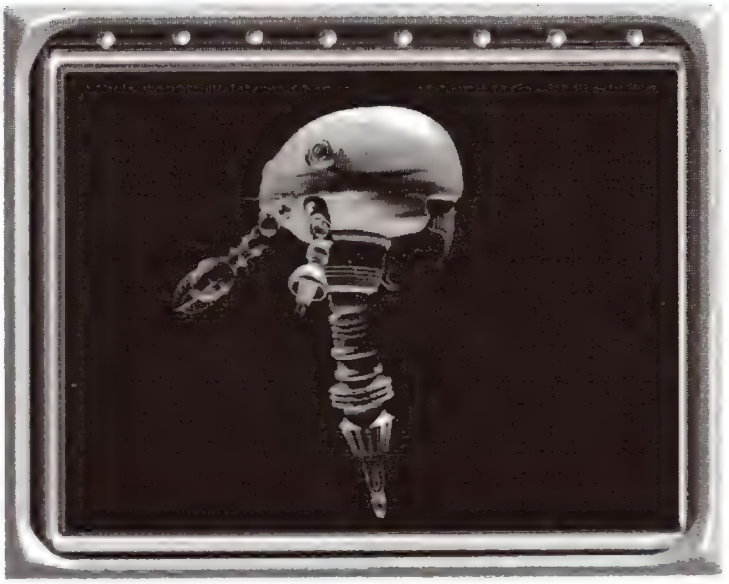
- The Sectoid taunts are all quotes from *Beavis and Butt-Head*. Other aliens taunt you with famous quotes from such TV shows and movies as *Star Trek: The Next Generation* (Mutons); *Monty Python and the Holy Grail* (Psilords); *Red Dwarf* (Ethereals); and *South Park* (Aereons).
- There are lots of references to the next X-COM game casually strewn about in *Interceptor*, especially in the HNN news reports.
- F. Denman Williams, the wealthy software tycoon who (according to the official timeline) purchases X-COM after the First Alien War, is (more or less) named after *Interceptor*'s executive producer—William F. Denman.

- The cute '50s-looking couple pictured in the photo taped to the dashboard of the Super Avenger are our A.I. programmer John O'Neill and his wife Lisa.

- The Ethereal threat at the end of Alien Message 4 translates to "...I'll have your testicular nodes for fuzzy mirror dice...".
- The unit of measurement for base shield strength—the FSP—was invented because "points" sounded too clinical for the UFOpedia text. It stands for F****** Shield Points.
- The Ethereal in Alien Message 3 signs off by saying "...nasty, bad alien dude out."
- Some of the pilot call signs in the game—including Qaj, Rakki, Canuck, and ToxinD—are online names used by X-COM fans on the Internet.



- The *Patton*-class cruiser is a ship you'll be seeing again....
- All of the pilot photos in the game are pictures of members of the *Interceptor* development team and their significant others.
- The organic look of the alien ships was chosen because it coincided (somewhat) with the organic alien technology depicted in *X-COM Apocalypse*. This was already set in stone when we decided to set *Interceptor* prior to *Apocalypse* in the time line, so the organic look stayed in.



- In the original script for the losing animation, the movie continues to show the aliens landing on Earth, where the landing strut of one of their ships crushes a tiny human skeleton next to which is a smoldering teddy bear.
- The Doomsday Weapon is big. *Really* big. It's so big that the Death Star from *Star Wars* would only be the size of one of the Doomsday Weapon's "eyes."
- The *MacArthur* was not originally in the game. In the original conception, you flew your interceptors through the black hole directly.

Appendix

CHEATERS NEVER PROSPER!

ELL, THAT'S NOT REALLY TRUE, IS IT? Given the time, someone eventually comes up with ways to cheat at any game—*especially* computer games. Editors, hacks, and hidden cheat codes are an industry standard these days. The day the game hits the shelves, players all over the world are trying to come up with ways to get the better of it.

As a game designer, someone who's worked on a game for 18 months making sure the final result is both balanced and fun, I have to officially frown on cheating. As a game *player*, however, I acknowledge the fact that cheating can sometimes be a blast. After a dozen frustrating space battles at Superhuman level, what could be more cathartic than pumping up your Gatling Lasers to an ungodly level and vaporizing every alien ship with a single blast?

This appendix is designed to make your cheating experience as easy and enjoyable as possible. This probably robs some hackers of hours of fun of their own, digging through the game searching for all the cheats, but so be it. There are two ways you can cheat at *Interceptor*: editing the data files and typing in cheat codes.

> **Warning** If you don't want to know the cheat codes, stop reading this appendix *right now*!
>
> WARN-TRON

EDITING THE DATA FILES

All of the data concerning such things as weapon data, research downloads, and so on is contained in a text file called GAMESETTINGS.INI. By changing specific numbers in this file, you can increase weapon strength, pump up shield power, and make research times almost zero. The following sections describe some of the more interesting bits of data you can edit. The names of the sections in this appendix are the same as the names of the relevant portions of the text file, as are the attribute names. By changing the numbers (to any positive whole number) you alter the attribute in some way.

> **Note** The sections are listed in the order they are found in the text file.
>
> NOTE-MASTER 2000

> **Warning** It is *highly* recommended that you not mess with anything except the numbers described in this appendix—if it ain't listed, don't touch it. By changing any other values, you might cause the game to malfunction. Also, you should *always* make a backup of GAMESETTINGS.INI before you start editing the numbers.
>
> WARN-TRON

ECONOMICS SETTINGS BASED ON DIFFICULTY

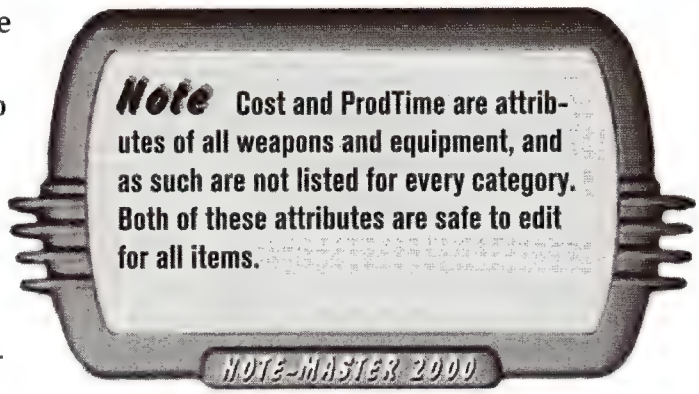
- **Starting Treasury:** The amount of money you start the game with
- **ExchangeRate:** The amount of money

> **Multiplayer Tip** All data in multiplayer games is read in from the host machine's GAMESETTINGS file. Unless you are the host, any changes you have made to the file will not affect multiplayer games.
>
> MULTIPLAYER TIP-O-MATIC

outposts make per kiloton of raw materials mined (see Chapter 2 for a complete description)

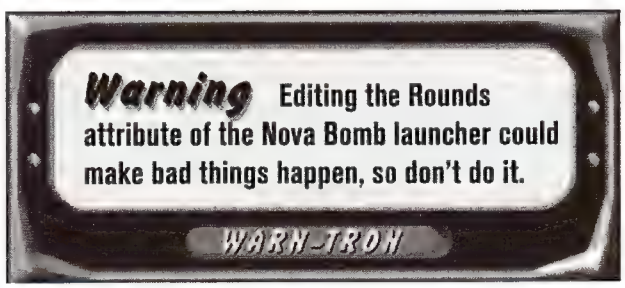
BEAM WEAPON ATTRIBUTES

- **Cost:** The purchase/manufacture cost of the weapon (in thousands of dollars)
- **ProdTime:** The amount of time it takes to produce the weapon (in man-hours); zero means the weapon is purchased, not manufactured
- **Range:** The maximum range of the weapon in kilometers
- **Damage:** The amount of damage inflicted per shot
- **EnergyCost:** The number of power points drained from the weapons capacitor per shot
- **RateOfFire:** The number of shots you can fire per second



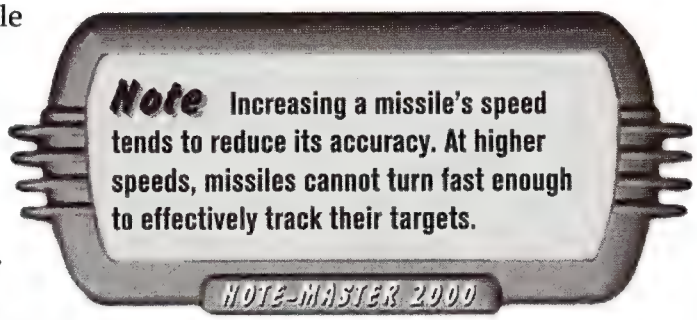
MISSILE LAUNCHER ATTRIBUTES

- **Rounds:** The number of missiles the launcher holds



MISSILE ATTRIBUTES

- **Speed:** The speed of the missile (in meters per second)
- **Duration:** The number of seconds the missile remains active
- **ProximityDamage:** The number of damage points inflicted on targets within a .25 kilometer range of the explosion



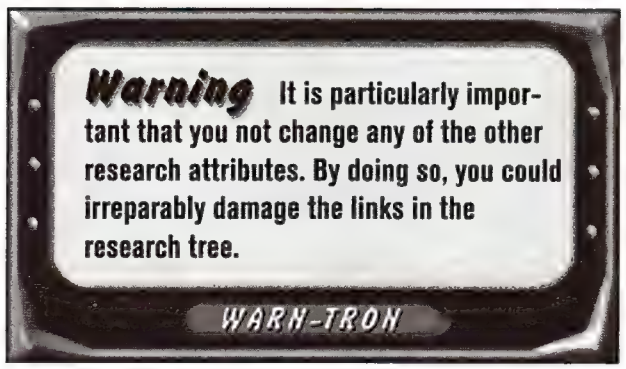
- **ImpactDamage:** The number of damage points inflicted when the missile hits its target

TECHNOLOGY RESEARCH ATTRIBUTES

- **FileSize:** The size of the research download file (in thousands of teraquads)

EQUIPMENT ATTRIBUTES

There are a lot of different attributes for each individual item in this category—changing the same attribute for two different items might produce different and unpredictable results. Here are a few things that it's safe to play with:

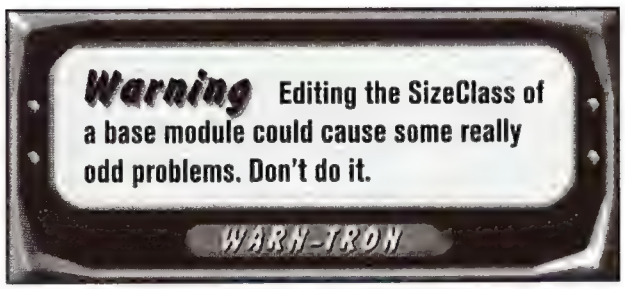


- **ProdTime and Cost:** These are the same as they are in all other categories—change them and you change the amount of time it takes to produce the item and how much it costs (respectively).
- **HitPoints:** Changes the number of hit points it takes to destroy an object. (In the case of armor types, it changes the amount of protection provided by the armor fore and aft.)
- **Special:** This is one of those attributes that means something different from item to item, but it's usually safe to change. In the case of engines and Vector Control Thrusters, Special is the amount of thrust the engine produces (higher = faster). In the case of shields, it is the amount of protection provided by the shielding fore and aft.

BASE MODULES

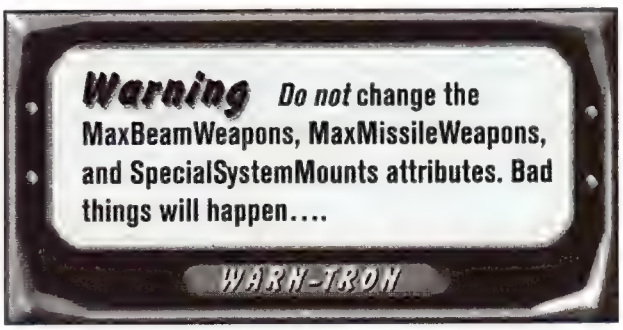
- **Cost and ProdTime:** Same as always (production time for base modules is in days rather than man-hours)
- **Maintenance:** The monthly maintenance cost (in thousands of dollars)
- **HitPoints:** The number of damage points it takes to destroy the module

BASIC SHIP HULLS



- **Cost, ProdTime, MaintCost, and HitPoints:** All of these can all be edited with no problem.
- **RollRate, YawRate, PitchRate, AngularDamp, and LockSpeed:** All of these affect the performance of the ship in flight. Feel free to mess with them, but be forewarned that odd things may result.
- **MaxSpeed:** The maximum speed (in meters per second) for the ship type in question.

RANK ADVANCEMENT



These indicate the number of experience points required for a pilot to rise in rank at each game difficulty level (see Chapter 7 for details on rank advancement). You can change them at will, if that sort of thing is important to you.

RECHARGE RATES

Located under the "Realtime vars" header, the Beam and Shield recharge rates control how many points of energy per second your systems gain at each level of recharge. Change them as you like.

AFTERBURNERS

This attribute, also located under "Realtime vars," controls the speed boost and energy cost per second of the afterburners. They can be changed without causing any problems.

LOCK TIME

The LockTime and LockAngle attributes for each sensor type (also listed in the "Realtime vars" section of the file) indicate the time (in milliseconds) it takes to achieve a missile lock and the size of the detection area in which the lock can be achieved. Feel free to play around with these values.

HIT POINT CHARTS

This is the section of the file that controls the hit points for large objects such as bases, outposts, and OPPs. The numbers you should be interested in are:

- **HP1:** The number of hit points it takes to destroy the structure itself
- **SD:** The number of protection points provided by the facility's shields

The rest of the numbers are inconsequential and are not used by the game.

CHEAT CODES

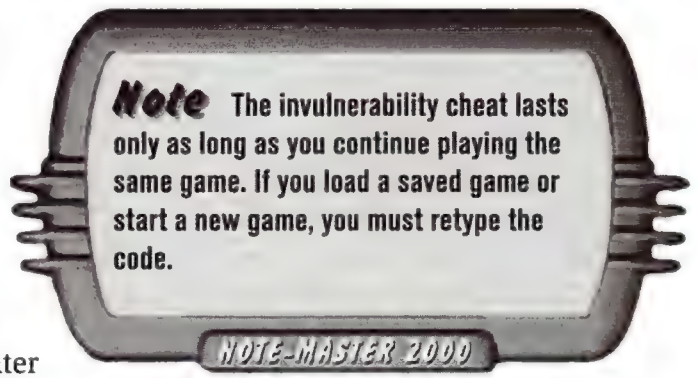
What would a game be without a set of cheat codes? Truth be told, every game has cheats built in during development—it's easier to test the game if you can use a special code to quickly set up some situation that would normally take hours of intensive gameplay to create. Most developers take out the cheats or hide them away before the game is released. If the latter is the case, some game magazine eventually snoops them out (with the help of some persistent gamers) and publishes them for all the world to see.

No need to wait this time. The following is a list of all the cheats in *X-COM Interceptor*. Enjoy!

STRATEGY CHEATS

These are the cheats for the strategy portion of the game. On any strategy screen, simply press the Ctrl and E keys simultaneously. After you hear a high-low double-beep, type in the cheats below. (You must press Ctrl + E before each cheat code.) Except as otherwise indicated, a prompt appears to let you know when the cheat is active.

- **battlecheats:** Activates the in-flight cheats described in the next section
- **canttouchthis:** Makes the ship you fly invulnerable in battle
- **fillerup:** Gives all your ships unlimited fuel (unlimited hyperspace range)
- **joyride:** Allows you to launch missions to locations such as X-COM facilities, allied freighter convoys, and so on when no aliens are present

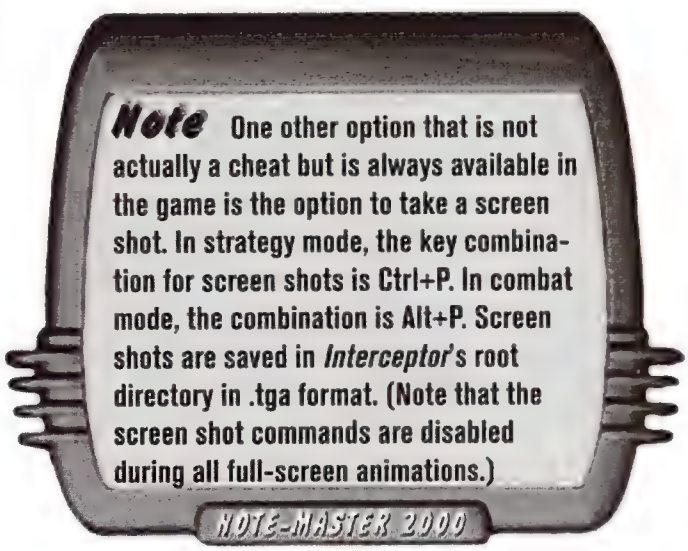


- **knowitall:** Gives you every research topic in the game
- **payday:** Adds $10,000,000 to your treasury (no prompt appears to confirm this cheat—check the Treasury field on the CSD to see if the cheat was successful)
- **quickbase:** Instantly completes any new base that is currently under construction
- **smarms:** Initiates the arms dealer side mission
- **smnova:** Initiates the hijacked Nova Bomb side mission
- **smraiders:** Initiates the Kabron Pirates side mission
- **smrecon:** Initiates a corporate recon side mission
- **smrescue:** Initiates the pirate base rescue side mission
- **smrogue:** Initiates the rogue freighter side mission

IN-FLIGHT CHEATS

If you activate the "battlecheats" cheat in the strategy portion of the game, the following key combinations are available for your combat pleasure:

- **Alt+~:** Destroys the currently selected target
- **Alt+2:** Disables the currently selected target
- **Alt+x:** Rotates through various weapon combinations, essentially changing your armament while in flight (watch the weapons indicator to see what you've got)



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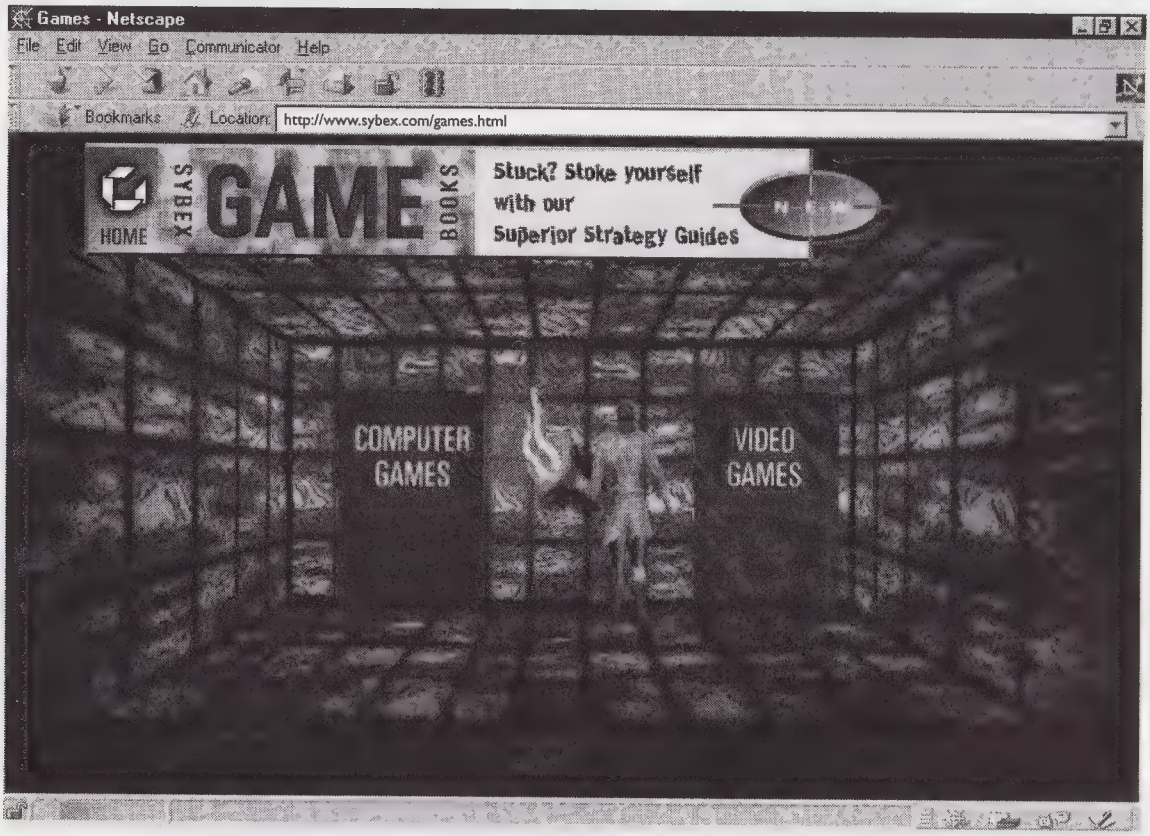

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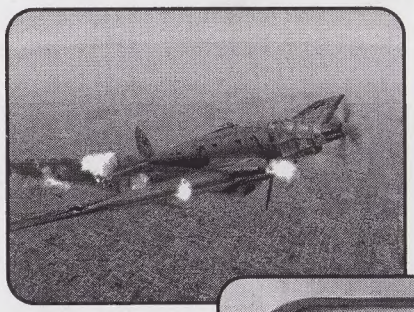

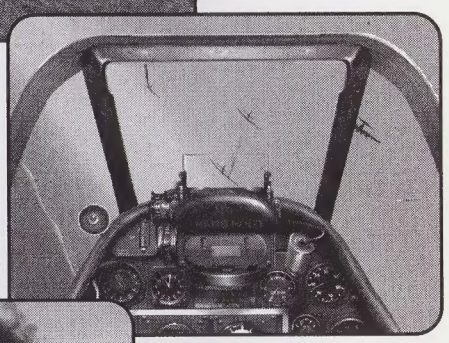

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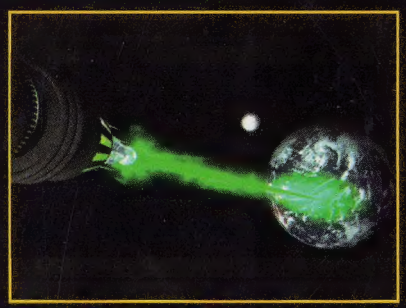
X-COM INTERCEPTOR

CRUSH THE ALIEN MENACE!

The only good alien is a dead one.



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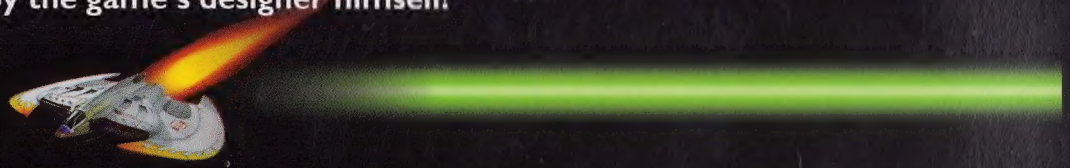

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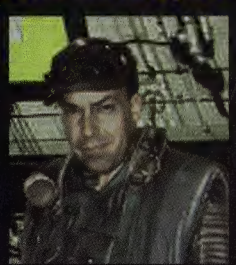
- **Hardcore tips and strategies** for Death Match combat that will throw your opponents into a tailspin

THIS TIME, THE BATTLE IS ON THEIR TURF!

About the Author

David Ellis works at MicroProse Software and is the designer of *X-COM: Interceptor*. He has written official strategy guides for a number of MicroProse games including the first three *X-COM* games and *Civilization II*.



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